

**KERNFORSCHUNGSZENTRUM  
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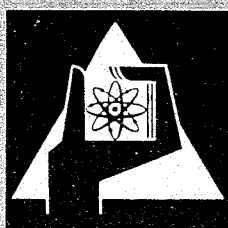
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Institut für Experimentelle Kernphysik

Berechnung von Massenwerten für Atomkerne mit  $A \leq 80$

H. Behrens, J. Jänecke



GESELLSCHAFT FÜR KERNFORSCHUNG M. B. H.  
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H. Behrens und J. Jänecke<sup>+</sup>

Gesellschaft für Kernforschung m.b.H. Karlsruhe

<sup>+</sup>The University of Michigan, Ann Arbor, Michigan



## 1. Einleitung

Neue Methoden ermöglichen neuerdings experimentelle Untersuchungen an Atomkernen mit einem hohen Überschuß an Protonen oder Neutronen. Neue Fragestellungen wurden hierdurch aufgeworfen. Zu den wichtigsten Problemen gehören die experimentelle Bestimmung von Massen protonen- und neutronenreicher Atomkerne, sowie die theoretische Beschreibung der Massen-Fläche. Viele dieser Fragestellungen wurden auf dem Symposium "Why and how should we investigate nuclides far off the stability line" in Lyskill, Schweden (1966) diskutiert <sup>1)</sup> [s. auch Ref. 22].

Der vorliegende Bericht enthält eine Tabelle von Massen protonen- und neutronenreicher Atomkerne mit  $A \leq 80$ . Zur Berechnung wurde eine Beziehung benutzt, die es erlaubt, die Anregungsenergien von Isospin-Analogzuständen abzuschätzen. Die Anregungsenergien lassen sich angenähert durch eine T-Abhängigkeit der Form  $T(T+1)$  beschreiben <sup>2)</sup>. Die Einzelheiten der Berechnung werden in Abschnitt 2 näher beschrieben.

Andere Methoden und Beziehungen zur Berechnung der Massen unbekannter Atomkerne sind bekannt. Diese wurden benutzt oder können benutzt werden, um unbekannte Werte zu berechnen <sup>3-7, 14-22)</sup>. Hinweise auf zusätzliche Literaturangaben finden sich insbesondere bei Wapstra <sup>15)</sup> und Zeldes <sup>21)</sup>. Von besonderem Interesse sind hier die neuen Massenbeziehungen von Garvey und Kelson <sup>5,6)</sup>, die voraussichtlich die umfassendsten Voraussagen ergeben werden. Noch wesentlich genauere Voraussagen sind möglich, wenn man sich auf einen kleineren Bereich von Atomkernen, wie zum Beispiel auf die  $1 f_{7/2}$  Schale, beschränkt <sup>8)</sup>.

Die meisten der oben erwähnten Methoden lassen sich nur mit Schwierigkeiten auf die sehr leichten Atomkerne anwenden. Im Gegensatz dazu ist das in diesem Bericht beschriebene Verfahren geeignet, in diesem Fall Voraussagen zu machen. Dies war ein Grund, die vorliegenden Tabellen zu verfassen. Der zweite Grund bestand in der Hoffnung, Hinweise auf die theoretisch interessante Frage nach den zu erwartenden Abweichungen von der  $T(T+1)$  - Abhängigkeit der Anregungsenergien von Analogzuständen zu erhalten. Aus einem Vergleich unserer mit anderen Voraussagen oder aus dem Verlauf der berechneten Stabilitätsgrenzen für Protonen- und Neutronenemission sollte es möglich sein, solche Aussagen herzuleiten.

## 2. Berechnung der Tabelle

Zur Berechnung der Tabelle wurde das im Folgenden beschriebene Verfahren benutzt. Ausgangspunkt der Rechnung waren die experimentell bekannten Massen. Diese wurden fast ausschließlich den Massentabellen von Mattauch et.al.<sup>9)</sup> entnommen. Einige neuere Massenwerte stammen aus anderen Arbeiten, grösstenteils aus dem Bericht von Maples et.al.<sup>10)</sup>. Die experimentellen Massenwerte wurden direkt in die Tabelle aufgenommen. Sie lassen sich an den kleinen Fehlern erkennen. Die  $T(T+1)$  - Anhängigkeit der Anregungsenergien von Isospin-Analogzuständen<sup>2)</sup> erlaubt es nun die Anregungsenergien solcher Zustände zu berechnen, die den Grundzuständen benachbarter Isobare analog sind. Die Berechnung der Grundzustände, d.h. also der Massen, erfordert dann nur noch eine Abschätzung der Coulomb Energiedifferenzen.

Die Energien aller  $2T+1$  Mitglieder eines Isospin-Multipletts unterscheiden sich nur durch die Coulomb Energien und durch den Massenunterschied zwischen einem Neutron und einem Proton. In einer ganzen Reihe von Fällen kann deshalb das obige Verfahren abgekürzt werden, nämlich dann, wenn zu einem vorgegebenen unbekanntem Kern die Masse des zugeordneten Spiegelkerns höherer Ordnung ( $A' = A$ ,  $T' = T$ ,  $T'_z = -T_z$ ) bekannt ist. Falls möglich, wurde stets das verkürzte Verfahren benutzt, da es zu genaueren Voraussagen führt.

Die Anregungsenergien  $\Delta_{TT}(A)$  von Isospin-Analogzuständen (oder genauer: der Energieunterschied zwischen den energetisch tiefsten Zuständen zu vorgegebenen Isospin  $T$  und  $T'$ ) bei einer bestimmten Massenzahl  $A$  lassen sich angenähert

durch die Beziehungen

$$\Delta_{TT'}(A) = \frac{a(A)}{A} [T(T+1) - T'(T'+1)] \quad (1)$$

und

$$\Delta_{TT'}(A) = \frac{a(A)}{A} [T(T+1) - T'(T'+1)] \pm 2\delta(A) \quad (2)$$

beschreiben. Die erste Beziehung gilt für die Fälle (i)  $A = \text{ungerade}$  und (ii)  $A = \text{gerade}$ ,  $T-T' = \text{gerade}$ . Die zweite Beziehung gilt für (iii)  $A = \text{gerade}$ ,  $T-T' = \text{ungerade}$ . Im letzteren Fall muss also ein Paarungsterm  $\delta(A)$  berücksichtigt werden. Das positive (negative) Vorzeichen gilt für  $\frac{1}{2}A - T' = \text{gerade}$  (ungerade). Die Werte für die  $A$ -abhängigen Parameter  $a(A)$  und  $\delta(A)$  sind in Tabelle 1 aufgeführt.

Die Coulomb Energiedifferenzen  $\Delta E_C$  benachbarter Isospin-Analogzustände wurden für Protonenzahlen  $Z < 28$  und Neutronenzahlen  $N \leq 28$  nach der Beziehung

$$\Delta E_C(Z+1|Z) = E_1(Z-Z_0) + E_2 + \frac{1}{2} E_3 \quad (3)$$

berechnet <sup>11)</sup>. Hier ist  $Z_0$  die grösste magische Zahl kleiner als  $Z$ . Der oszillierende Coulomb Paarungsterm wurde durch  $\frac{1}{2} E_3$  angenähert. Schaleneffekte wurden berücksichtigt. Die Parameter  $E_1$ ,  $E_2$  und  $E_3$  nehmen innerhalb der verschiedenen Schalen die in Tabelle 2 angegebenen unterschiedlichen Werte an. Bei gemischten Konfigurationen wurden für  $E_1$  und  $E_2$  die entsprechenden Mittelwerte benutzt.



Zur Berechnung der Coulomb Energieunterschiede zwischen Spiegelkernen höherer Ordnung diene für  $Z < 28$  und  $N \leq 28$  der Ausdruck

$$\Delta E_C \left( \frac{1}{2}A - T \mid \frac{1}{2}A + T \right) = T E_1 (A - 2Z_0 - 1) + 2E_2 + E_3 . \quad (4)$$

Für alle schwereren Kerne mit  $Z \geq 28$  oder  $N > 28$  wurden die Beziehungen

$$\Delta E_C (Z + 1 \mid Z) = \frac{1}{\sqrt[3]{A}} [E_4 (Z + \frac{1}{2}) + E_5] \quad (5)$$

und

$$\Delta E_C \left( \frac{1}{2}A - T \mid \frac{1}{2}A + T \right) = \frac{T}{\sqrt[3]{A}} [E_4 A + 2E_5] \quad (6)$$

mit  $E_4 = 1390 \pm 3$  keV und  $E_5 = -2814 \pm 139$  keV benutzt <sup>12)</sup>.

Das Ergebnis der Rechnungen ist in Tabelle 3 dargestellt. Als Eingabedaten dienten die Bindungsenergien der experimentell gemessenen Kerne. Diese eingegebenen Kerne sind an ihren kleinen Fehlern zu erkennen. Die Anordnung der Zahlenwerte entspricht den Massentabellen von Mattauch et al. <sup>9)</sup>. Angegeben sind in den verschiedenen Spalten die Massenzexesse in MeV und  $\mu\mu$  [ $\Delta M(^{12}\text{C}) = 0$ ], die Bindungsenergien in MeV, die  $\beta^-$ -Zerfallsenergien in MeV, sowie die Elektroneneinfangsenergien in MeV. Um die  $\beta^+$ -Zerfallsenergien zu erhalten, muß von den Elektroneneinfangsenergien 1 022 keV abgezogen werden.

Alle berechneten und in Tabelle 3 wiedergegebenen Energiewerte sind mit Fehlern versehen. Diese Fehler wurden geschätzt. Sie haben etwa den Charakter eines mittleren quadratischen

Fehlern und sollten damit angenähert Auskunft über die Rechengenauigkeit geben. Starke systematische Fehlerquellen sind vorhanden, insbesondere bei der Berechnung der Größen  $\Delta_{TT}$ . Aus diesem Grund wurden die zugeordneten Fehler linear und nicht quadratisch addiert.

Im Zusammenhang mit der Diskussion in Abschnitt 3 wurden zusätzliche Bindungsenergien aller in Tabelle 3 aufgeführten Atomkerne benötigt. Dies sind Bindungsenergien bezüglich der Emission von ein und zwei Protonen, von ein und zwei Neutronen und von  $\alpha$ -Teilchen. Sie wurden berechnet, die zugehörige Tabelle aber nicht in diesem Bericht aufgenommen.

Alle numerischen Berechnungen wurden an der IBM 7074 Rechenmaschine des Kernforschungszentrums Karlsruhe durchgeführt.

### 3. Diskussion

Wie in Abschnitt 2 erwähnt wurden, ausgehend von den in der Tabelle 3 wiedergegebenen Massenwerten, die Bindungsenergien für die Emission von ein oder zwei Protonen, von ein oder zwei Neutronen oder von  $\alpha$ -Teilchen berechnet. Damit kann eine Aussage über die Stabilität von Kernen gegenüber Emission von ein oder mehreren Nukleonen gewonnen werden. Das Ergebnis ist in Abb. 1 graphisch dargestellt. Die Abbildung zeigt die beiden berechneten Stabilitätsgrenzen, d.h. die Grenzen bezüglich der Emission von Protonen und von Neutronen. Atomkerne, die sehr wahrscheinlich teilchenstabil oder teilcheninstabil sind, sind durch Kreis mit innerlichem Punkt gekennzeichnet; Atomkerne, bei denen die geschätzte Rechengenauigkeit nicht ausreicht, um eine bestimmte Aussage zu machen, sind durch einen offenen Kreis gekennzeichnet. Die Stabilitätsgrenze bezüglich Protonenemission stimmt recht gut mit den Voraussagen anderer Autoren <sup>3-7)</sup> überein. Die berechnete Stabilitätsgrenze bezüglich Neutronenemission hingegen ist völlig unrealistisch. Es ist ausserordentlich unwahrscheinlich, dass die Ausbuchtungen in der Kurve um  $A = 20, 33, 45$  und  $63$  den tatsächlichen Verhältnissen entsprechen. Dieses Ergebnis bestätigt die von Zeldes <sup>18)</sup> diskutierte Problematik bei der Extrapolation von Massenbeziehungen über zu weite Bereiche. Gleichzeitig bestätigt das obige Ergebnis die Vermutung, dass Abweichungen von einer ungestörten  $T(T+1)$  - Abhängigkeit der Anregungsenergien von Analogzuständen vorhanden sein müssen. Ähnlich wie bei den Rotationsbanden deformierter Kerne ist es naheliegend, einen quadratischen Term  $[T(T+1)]^2$  einzuführen. Das Vorzeichen dieses Terms muss so beschaffen sein, dass das wellenförmige Verhalten der An-

regungsenergien von Analogzuständen nach Kernen mit grösserem Neutronen- oder Protonenüberschuss hin allmählich ausgeglichen wird. Dieses Verhalten wird durch den Parameter  $a(A)$  von Tabelle 1 bestimmt. Die obigen Überlegungen machen es demnach wahrscheinlich, dass der numerische Koeffizient des quadratischen Terms  $[T(T+1)]^2$  in der Nähe von  $A = 20, 34, 47, 66$  ein positives Vorzeichen hat, und dass er in der Nähe von  $A = 16, 29, 40, 58$  ein negatives Vorzeichen hat. Die Extrapolation der obigen Massenbeziehungen über kleinere Bereiche in der Nähe der bekannten stabilen Kerne sollte dagegen nach wie vor relativ zuverlässig sein. Dies ist von Interesse insbesondere für die sehr leichten Kerne, die sich nach den Methoden von Garvey und Kelson<sup>5,6)</sup> nicht oder nur mit Schwierigkeiten voraussagen lassen. So wurde von ihnen beispielsweise der Kern  $^{11}\text{Li}$  als teilcheninstabil vorausgesagt mit einer Zerfallsenergie von 2.5 MeV. Neuere Messungen<sup>13)</sup> hingegen zeigten, dass der Kern  $^{11}\text{Li}$  teilchenstabil ist.

Literaturzitate:

- 1) Proceedings of the symposium on Nuclides far off the Stability Line, Lysekil, Schweden (1966), Arkiv för Fysik 36 (1967) 1-686
- 2) J.Jänecke, Nuclear Physics 73 (1965) 97
- 3) V.I. Goldanskii, Nuclear Physics 19 (1960) 482
- 4) J.Jänecke, Nuclear Physics 61 (1965) 326
- 5) G.T. Garvey und I. Kelson, Phys.Rev.Lett. 16 (1966) 197
- 6) I. Kelson und G.T. Garvey, Phys.Lett. 23 (1966) 689
- 7) J. Cerny, Ann.Rev.Nucl.Sci. (1968), im Druck
- 8) J. Jänecke, Nuclear Physics A 114 (1968) 433
- 9) J.H.E. Mattauch, W.Thiele und A.H. Wapstra, Nuclear Physics 67 (1965) 1
- 10) C. Maples, G.W. Groth und J. Cerny, UCRL report 16964 (1966)
- 11) J. Jänecke, Phys.Rev. 147 (1966) 735
- 12) N. Zeldes, Arkiv för Fysik 36 (1968) 361
- 13) A.M. Poskanzer, S.W. Cospers, L.K. Hyde und J. Cerny, Phys.Rev.Lett. 17 (1966) 1271
- 14) W.J. Swiatecki, Arkiv för Fysik 36 (1967) 325
- 15) A.H. Wapstra, Arkiv för Fysik 36 (1967) 329
- 16) W.D. Myers und W.J. Swiatecki, Arkiv för Fysik 36 (1967) 343
- 17) S.A.E. Johansson und C.-O. Wene, Arkiv för Fysik 36 (1967) 353
- 18) N. Zeldes, Arkiv för Fysik 36 (1967) 361
- 19) K. Bleuler, M. Beiner, K. Erkelenz und R. Schneider, Arkiv för Fysik 36 (1967) 385
- 20) M. Bauer und V. Canuto, Arkiv för Fysik 36 (1967) 393
- 21) N. Zeldes, A. Grill und A. Simievic, Mat.Fys.Skr.Dan,Vid. Selsk. 3, no. 5 (1967)
- 22) Proceedings of the Third International Conference on Atomic Masses, Winnipeg, Manitoba (1967), ed. by R.C. Barber (University of Manitoba Press, 1967)

Tabelle 1

Parameter  $a(A)$  und  $\delta(A)$  in den Beziehungen (1) und (2) in MeV

Tabelle 2

Parameter  $E_1$ ,  $E_2$  und  $E_3$  in den Beziehungen (3) und (4) in keV

Tabelle 3

Massenexzesse in keV und  $\mu\mu$ , Bindungsenergien in keV und  $\beta^-$ -Zerfallsenergien in keV

Fig. 1

Berechnete Stabilitätsgrenzen bezüglich der Emission von Protonen und Neutronen

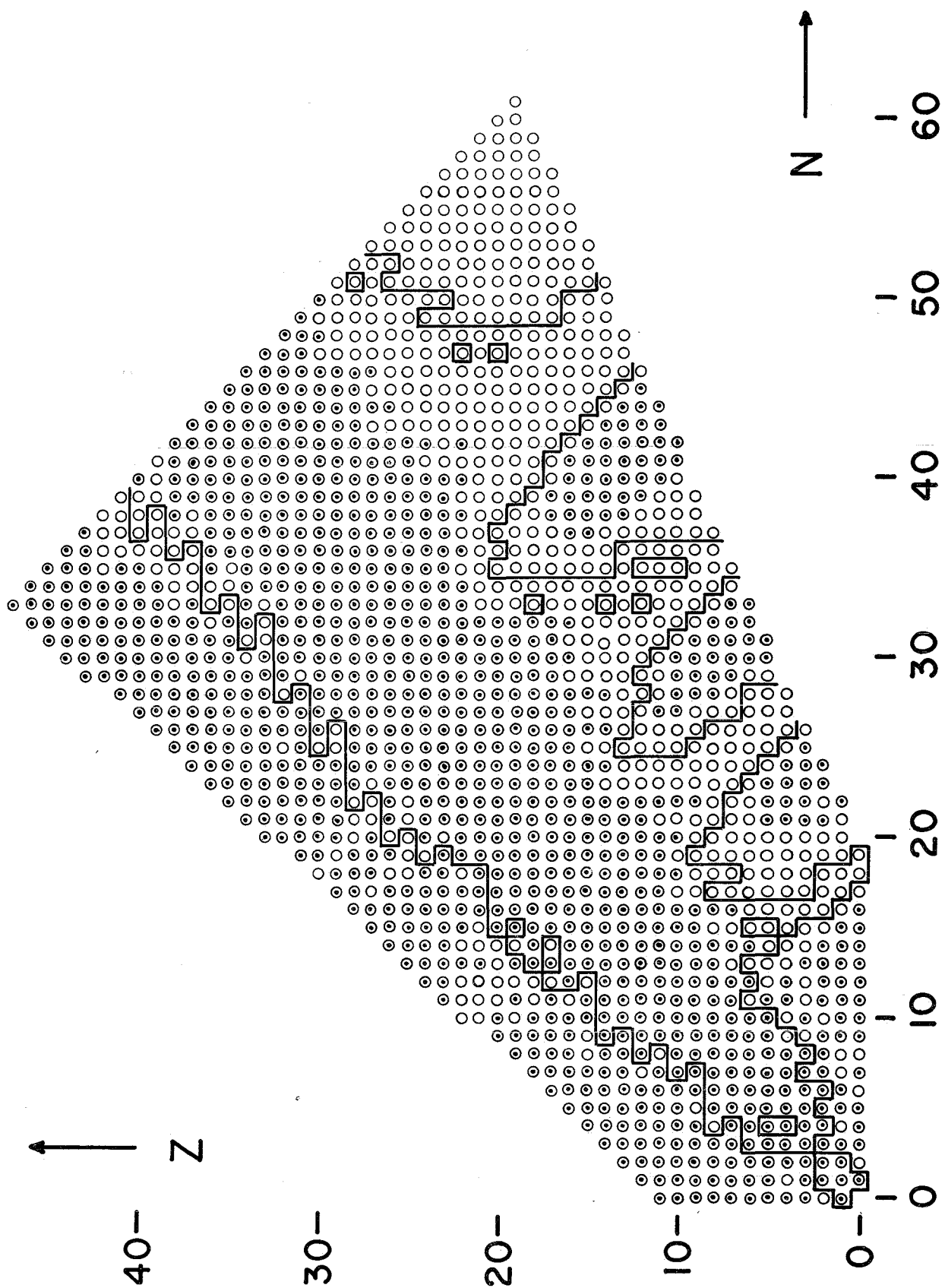
Tabelle 1

A	a(A)	$\delta$ (A)	A	a(A)	$\delta$ (A)
1	7.400	6.780	41	68.90	1.74
2	14.800	6.290	42	66.80	1.75
3	21.700	5.800	43	65.10	1.75
4	27.300	5.300	44	63.80	1.73
5	31.700	4.810	45	62.80	1.71
6	34.400	4.310	46	62.40	1.67
7	36.400	3.900	47	62.40	1.62
8	38.800	3.69	48	62.60	1.57
9	41.400	3.54	49	63.40	1.51
10	44.500	3.42	50	64.90	1.47
11	47.800	3.29	51	67.50	1.43
12	51.200	3.18	52	70.50	1.40
13	54.30	3.06	53	73.40	1.38
14	56.80	2.93	54	76.10	1.37
15	58.70	2.82	55	79.10	1.37
16	59.40	2.72	56	81.70	1.38
17	59.00	2.62	57	82.40	1.40
18	57.70	2.52	58	81.30	1.42
19	55.60	2.42	59	79.40	1.43
20	55.00	2.33	60	77.20	1.43
21	55.50	2.25	61	75.20	1.41
22	56.90	2.18	62	73.40	1.38
23	58.70	2.10	63	71.90	1.36
24	60.60	2.05	64	70.50	1.34
25	62.50	1.99	65	69.70	1.33
26	64.40	1.93	66	69.40	1.31
27	66.30	1.88	67	69.40	1.31
28	67.10	1.84	68	69.50	1.31
29	66.30	1.80	69	69.90	1.33
30	64.70	1.75	70	70.40	1.35
31	62.40	1.70	71	71.10	1.37
32	60.40	1.66	72	71.80	1.39
33	59.20	1.62	73	72.70	1.41
34	59.00	1.60	74	73.90	1.42
35	60.50	1.58	75	75.20	1.43
36	63.10	1.59	76	76.50	1.43
37	66.10	1.61	77	78.20	1.42
38	68.40	1.64	78	79.60	1.41
39	69.70	1.68	79	80.80	1.41
40	70.10	1.71	80	82.00	1.40

Tabelle 2

Schale	$Z_0$	$E_1$	$E_2$	$E_3$
1 $s_{1/2}$	0	630	33	100
1 $p_{3/2}$	2	531	963	100
1 $p_{1/2}$	6	441	2982	100
1 $d_{5/2}$	8	379	3575	100
2 $s_{1/2}$	14	342	5785	100
1 $d_{3/2}$	16	279	6340	100
1 $f_{1/2}$	20	302	7240	100





A	N	Z	N-Z	MASSEN-EXCESS (MEV)		MASSEN-EXCESS (MICRO-EINH.)		BINDUNGS-ENERGIE (MEV)		NEGATONEN-ZERFALL ENERGIE (MEV)		ELEKTRONEN-EINFANG ENERGIE (MEV)	
2	2	0	2	16.7019	4.3292	17930.5	4647.6	-0.5590	4.3292	3.5660	4.3292		
	1	1	0	13.1359	0.0001	14102.2	0.1	2.2245	0.0001	-1.8191	4.3292	-3.5660	4.3292
	0	2	-2	14.9550	4.3292	16055.1	4647.6	-0.3770	4.3292			1.8191	4.3292
3	3	0	3	37.6974	3.9910	40470.5	4284.6	-13.4831	3.9910	22.7475	3.9910		
	2	1	1	14.9500	0.0001	16049.7	0.1	8.4819	0.0002	0.0186	0.0001	-22.7475	3.9910
	1	2	-1	14.9313	0.0001	16029.7	0.1	7.7181	0.0002	-21.4491	3.9909	-0.0186	0.0001
	0	3	-3	36.3804	3.9909	39056.6	4284.5	-14.5134	3.9909			21.4491	3.9909
4	4	0	4	44.4380	4.6856	47706.9	5030.3	-12.1522	4.6856	18.0130	4.7911		
	3	1	2	26.4250	1.0000	28368.9	1073.6	5.0783	1.0000	24.0003	1.0000	-18.0130	4.7911
	2	2	0	2.4248	0.0003	2603.1	0.3	28.2961	0.0004	-24.5003	1.0000	-24.0003	1.0000
	1	3	-2	26.9250	1.0000	28905.7	1073.6	3.0134	1.0000	-16.7146	4.7911	24.5003	1.0000
	0	4	-4	43.6396	4.6856	46849.8	5030.3	-14.4836	4.6856			16.7146	4.7911
5	5	0	5	63.4067	6.8396	68071.1	7342.8	-23.0495	6.8396	33.2785	7.6512		
	4	1	3	30.1283	3.4293	32344.6	3681.6	9.4465	3.4293	18.6740	3.4294	-33.2785	7.6512
	3	2	1	11.4543	0.0190	12296.9	20.4	27.3380	0.0190	-0.2246	0.0416	-18.6740	3.4294
	2	3	-1	11.6789	0.0370	12538.0	39.7	26.3310	0.0370	-19.3661	3.4475	0.2246	0.0416
	1	4	-3	31.0449	3.4473	33328.6	3700.9	6.1825	3.4473	-31.9801	7.6753	19.3661	3.4475
	0	5	-5	63.0250	6.8576	67661.2	7362.1	-26.5800	6.8576			31.9801	7.6753
6	6	0	6	76.4294	6.3279	82051.7	6793.4	-28.0007	6.3279	27.6240	7.0757		
	5	1	4	48.8054	3.1659	52395.7	3398.8	-1.1592	3.1659	31.2073	3.1659	-27.6240	7.0757
	4	2	2	17.5981	0.0040	18892.7	4.3	29.2656	0.0040	3.5098	0.0041	-31.2073	3.1659
	3	3	0	14.0884	0.0011	15124.8	1.2	31.9929	0.0012	-4.2867	0.0051	-3.5098	0.0041
	2	4	-2	18.3750	0.0050	19726.8	5.4	26.9238	0.0050	-32.4799	3.1669	4.2867	0.0051
	1	5	-4	50.8549	3.1669	54595.9	3399.9	-6.3385	3.1669	-26.3256	7.0770	32.4799	3.1669
	0	6	-6	77.1805	6.3289	82858.1	6794.4	-33.4465	6.3289			26.3256	7.0770
7	7	0	7	93.1157	8.8146	99965.5	9463.0	-36.6156	8.8146	37.1850	10.5941		
	6	1	5	55.9307	5.8768	60045.1	6309.1	-0.2131	5.8768	25.6540	6.5707	-37.1850	10.5941
	5	2	3	30.2768	2.9390	32504.0	3155.2	24.6584	2.9390	15.3695	2.9390	-25.6540	6.5707
	4	3	1	14.9073	0.0011	16004.0	1.2	39.2454	0.0012	-0.8616	0.0016	-15.3695	2.9390
	3	4	-1	15.7689	0.0011	16928.9	1.2	37.6014	0.0012	-16.8926	2.9390	0.8616	0.0016
	2	5	-3	32.6614	2.9390	35064.1	3155.2	19.9264	2.9390	-27.5071	6.5707	16.8926	2.9390
	1	6	-5	60.1685	5.8768	64594.6	6309.1	-8.3631	5.8768	-37.1586	10.5941	27.5071	6.5707
	0	7	-7	97.3270	8.8146	104486.7	9463.0	-46.3041	8.8146			37.1586	10.5941
8	8	0	8	99.2449	5.5911	106545.6	6002.4	-34.6734	5.5911	32.4255	6.2781		
	7	1	6	66.8195	2.8556	71734.9	3065.6	-3.0304	2.8556	35.1695	2.8581	-32.4255	6.2781
	6	2	4	31.6500	0.1200	33978.3	128.8	31.3566	0.1200	10.7039	0.1200	-35.1695	2.8581
	5	3	2	20.9462	0.0015	22487.0	1.6	41.2780	0.0016	16.0020	0.0017	-10.7039	0.1200
	4	4	0	4.9442	0.0007	5307.9	0.8	56.4975	0.0009	-17.9789	0.0017	-16.0020	0.0017
	3	5	-2	22.9231	0.0015	24609.4	1.6	37.7362	0.0016	-12.8352	1.0730	17.9789	0.0017

A	N	Z	N-Z	MASSEN-EXCESS (MEV)		MASSEN-EXCESS (MICRO-EINH.)		BINDUNGS-ENERGIE (MEV)		NEGATONEN-ZERFALL ENERGIE (MEV)		ELEKTRONEN-EINFANG ENERGIE (MEV)	
	2	6	-4	35.7582	1.0730	38388.7	1151.9	24.1186	1.0730	-37.2551	3.9568	12.8352	1.0730
	1	7	-6	73.0133	3.8085	78384.3	4088.7	-13.9189	3.8085	-32.3991	7.5716	37.2551	3.9568
	0	8	-8	105.4123	6.5441	113166.7	7025.5	-47.1004	6.5441			32.3991	7.5716
9	9	0	9	119.6655	7.6791	128468.4	8244.0	-47.0225	7.6791	42.0505	9.2328		
	8	1	7	77.6150	5.1260	83324.6	5503.1	-5.7545	5.1260	30.8895	5.7356	-42.0505	9.2328
	7	2	5	46.7256	2.5730	50162.8	2762.3	24.3525	2.5730	21.7600	2.5731	-30.8895	5.7356
	6	3	3	24.9656	0.0200	26802.1	21.5	45.3300	0.0200	13.6152	0.0200	-21.7600	2.5731
	5	4	1	11.3505	0.0008	12185.4	0.9	58.1627	0.0010	-1.0682	0.0015	-13.6152	0.0200
	4	5	-1	12.4186	0.0013	13332.2	1.4	56.3121	0.0014	-16.4974	0.0051	1.0682	0.0015
	3	6	-3	28.9160	0.0050	31043.1	5.3	39.0323	0.0050	-24.2401	2.5580	16.4974	0.0051
	2	7	-5	53.1560	2.5580	57066.3	2746.2	14.0098	2.5580	-33.5106	5.7154	24.2401	2.5580
	1	8	-7	86.6666	5.1110	93042.0	5487.0	-20.2832	5.1110	-42.4551	9.2120	33.5106	5.7154
	0	9	-9	129.1216	7.6641	138620.1	8227.9	-63.5207	7.6641			42.4551	9.2120
10	10	0	10	133.5048	9.5554	143325.8	10258.3	-52.7904	9.5554	38.5000	11.9446		
	9	1	8	95.0049	7.1671	101993.7	7694.3	-15.0729	7.1671	40.8640	8.6142	-38.5000	11.9446
	8	2	6	54.1409	4.7788	58123.6	5130.4	25.0086	4.7788	18.6200	5.3434	-40.8640	8.6142
	7	3	4	35.5210	2.3906	38134.0	2566.4	42.8461	2.3906	22.9140	2.3906	-18.6200	5.3434
	6	4	2	12.6070	0.0022	13534.4	2.4	64.9776	0.0023	0.5549	0.0023	-22.9140	2.3906
	5	5	0	12.0522	0.0006	12938.7	0.7	64.7500	0.0009	-3.6066	0.0130	-0.5549	0.0023
	4	6	-2	15.6587	0.0130	16810.6	13.9	60.3610	0.0130	-25.8801	2.4013	3.6066	0.0130
	3	7	-4	41.5388	2.4013	44594.5	2577.9	33.6985	2.4013	-21.5861	5.3578	25.8801	2.4013
	2	8	-6	63.1248	4.7895	67768.4	5141.9	11.3300	4.7895	-43.5116	8.6291	21.5861	5.3578
	1	9	-8	106.6364	7.1778	114480.8	7705.8	-32.9640	7.1778	-38.9046	11.9596	43.5116	8.6291
	0	10	-10	145.5409	9.5661	156247.3	10269.8	-72.6510	9.5661			38.9046	11.9596
11	11	0	11	155.4264	8.9732	166860.0	9633.3	-66.6405	8.9732	48.8295	11.2188		
	10	1	9	106.5969	6.7337	114438.5	7229.0	-18.5935	6.7337	37.5330	8.0956	-48.8295	11.2188
	9	2	7	69.0639	4.4941	74144.4	4824.7	18.1570	4.4941	28.8816	5.0279	-37.5330	8.0956
	8	3	5	40.1823	2.2546	43138.2	2420.4	46.2562	2.2546	20.0012	2.2546	-28.8816	5.0279
	7	4	3	20.1810	0.0150	21665.6	16.1	65.4750	0.0150	11.5134	0.0150	-20.0012	2.2546
	6	5	1	8.6677	0.0005	9305.3	0.6	76.2059	0.0009	-1.9807	0.0013	-11.5134	0.0150
	5	6	-1	10.6483	0.0012	11431.7	1.3	73.4428	0.0014	-17.5269	0.6392	1.9807	0.0013
	4	7	-3	28.1752	0.6392	30247.8	686.2	55.1335	0.6392	-23.4533	2.9489	17.5269	0.6392
	3	8	-5	51.6285	2.8788	55426.4	3090.5	30.8977	2.8788	-31.9547	5.8724	23.4533	2.9489
	2	9	-7	83.5832	5.1183	89731.8	5494.8	-1.8395	5.1183	-40.6851	8.9630	31.9547	5.8724
	1	10	-9	124.2684	7.3579	133409.9	7899.1	-43.3070	7.3579	-49.2341	12.0934	40.6851	8.9630
	0	11	-11	173.5024	9.5974	186265.7	10303.4	-93.3235	9.5974			49.2341	12.0934
12	12	0	12	171.5796	10.5281	184201.5	11302.6	-74.7224	10.5281	46.0590	13.4828		
	11	1	10	125.5207	8.4228	134754.3	9042.4	-29.4459	8.4228	47.4506	10.5288	-46.0590	13.4828
	10	2	8	78.0701	6.3175	83813.1	6782.2	17.2223	6.3175	26.2368	7.5930	-47.4506	10.5288
	9	3	6	51.8333	4.2122	55646.3	4522.1	42.6766	4.2122	29.9685	4.7097	-26.2368	7.5930

A	N	Z	N-Z	MASSEN-EXCESS (MEV)		MASSEN-EXCESS (MICRO-EINH.)		BINDUNGS-ENERGIE (MEV)		NEGATONEN-ZERFALL ENERGIE (MEV)		ELEKTRONEN-EINFANG ENERGIE (MEV)	
	8	4	4	21.8648	2.1069	23473.3	2261.9	71.8626	2.1069	8.4946	2.1069	-29.9685	4.7097
	7	5	2	13.3702	0.0014	14353.8	1.5	79.5748	0.0016	13.3703	0.0015	-8.4946	2.1069
	6	6	0	-0.0000	0.0005	-0.0	0.5	92.1626	0.0009	-17.3491	0.0090	-13.3703	0.0015
	5	7	-2	17.3490	0.0090	18625.3	9.6	74.0311	0.0090	-12.4327	2.1143	17.3491	0.0090
	4	8	-4	29.7817	2.1143	31972.6	2269.8	60.8159	2.1143	-33.4966	4.7197	12.4327	2.1143
	3	9	-6	63.2783	4.2196	67933.2	4530.0	26.5369	4.2196	-29.7649	7.6033	33.4966	4.7197
	2	10	-8	93.0432	6.3249	99887.7	6790.2	-4.0104	6.3249	-51.1072	10.5391	29.7649	7.6033
	1	11	-10	144.1504	8.4302	154754.5	9050.4	-55.9001	8.4302			51.1072	10.5391
13	13	0	13	198.3810	9.9247	212974.4	10654.8	-93.4522	9.9247	55.7085	12.7103		
	12	1	11	142.6725	7.9406	153167.9	8524.7	-38.5262	7.9406	44.3701	9.9264	-55.7085	12.7103
	11	2	9	98.3024	5.9565	105533.8	6394.7	5.0614	5.9565	36.0558	7.1596	-44.3701	9.9264
	10	3	7	62.2466	3.9724	66825.7	4264.6	40.3347	3.9724	27.2469	4.4422	-36.0558	7.1596
	9	4	5	34.9997	1.9883	37574.4	2134.6	66.7992	1.9883	18.4381	1.9883	-27.2469	4.4422
	8	5	3	16.5617	0.0041	17780.0	4.4	84.4548	0.0042	13.4371	0.0042	-18.4381	1.9883
	7	6	1	3.1246	0.0010	3354.5	1.1	97.1094	0.0013	-2.2206	0.0016	-13.4371	0.0042
	6	7	-1	5.3452	0.0013	5738.4	1.3	94.1064	0.0015	-17.7649	0.0700	2.2206	0.0016
	5	8	-3	23.1100	0.0700	24810.1	75.1	75.5591	0.0700	-22.4212	2.0553	17.7649	0.0700
	4	9	-5	45.5312	2.0541	48880.6	2205.2	52.3555	2.0541	-31.2300	4.5306	22.4212	2.0553
	3	10	-7	76.7612	4.0382	82408.0	4335.3	20.3430	4.0382	-40.0389	7.2509	31.2300	4.5306
	2	11	-9	116.8001	6.0223	125392.2	6465.3	-20.4783	6.0223	-48.5312	10.0185	40.0389	7.2509
	1	12	-11	165.3313	8.0064	177493.5	8595.4	-69.7919	8.0064			48.5312	10.0185
14	14	0	14	213.2513	11.2490	228938.6	12076.5	-100.2511	11.2490	52.5380	14.6430		
	13	1	12	160.7133	9.3743	172535.8	10063.9	-48.4956	9.3743	52.9697	12.0051	-52.5380	14.6430
	12	2	10	107.7437	7.4997	115669.6	8051.4	3.6916	7.4997	33.1749	9.3747	-52.9697	12.0051
	11	3	8	74.5688	5.6250	80054.3	6038.8	36.0840	5.6250	36.3256	6.7606	-33.1749	9.3747
	10	4	6	38.2432	3.7503	41056.5	4026.2	71.6272	3.7503	16.0363	4.1932	-36.3256	6.7606
	9	5	4	22.2069	1.8757	23840.5	2013.6	86.8810	1.8757	19.1870	1.8757	-16.0363	4.1932
	8	6	2	3.0199	0.0004	3242.0	0.4	105.2856	0.0010	0.1562	0.0006	-19.1870	1.8757
	7	7	0	2.8637	0.0004	3074.4	0.5	104.6593	0.0010	-5.1444	0.0008	-0.1562	0.0006
	6	8	-2	8.0081	0.0007	8597.2	0.7	98.7325	0.0011	-23.6251	1.8758	5.1444	0.0008
	5	9	-4	31.6332	1.8758	33960.2	2013.8	74.3249	1.8758	-20.4744	4.1934	23.6251	1.8758
	4	10	-6	52.1076	3.7504	55940.8	4026.3	53.0681	3.7504	-40.7637	6.7607	20.4744	4.1934
	3	11	-8	92.8713	5.6251	99703.1	6038.9	11.5219	5.6251	-37.6130	9.3749	40.7637	6.7607
	2	12	-10	130.4843	7.4998	140083.0	8051.5	-26.8735	7.4998			37.6130	9.3749
15	15	0	15	234.6260	10.6565	251885.7	11440.4	-113.5544	10.6565	59.1050	13.8718		
	14	1	13	175.5210	8.8807	188432.8	9534.0	-55.2319	8.8807	49.2973	11.3730	-59.1050	13.8718
	13	2	11	126.2238	7.1048	135509.1	7627.5	-6.7171	7.1048	41.5101	8.8812	-49.2973	11.3730
	12	3	9	84.7136	5.3290	90945.4	5721.0	34.0106	5.3290	33.2285	6.4049	-41.5101	8.8812
	11	4	7	51.4852	3.5531	55272.6	3814.5	66.4566	3.5531	24.9468	3.9728	-33.2285	6.4049
	10	5	5	26.5384	1.7773	28490.7	1908.0	90.6209	1.7773	16.6651	1.7773	-24.9468	3.9728

A	N	Z	N-Z	MASSEN-EXCESS (MEV)		MASSEN-EXCESS (MICRO-EINH.)		BINDUNGS-ENERGIE (MEV)		NEGATONEN-ZERFALL ENERGIE (MEV)		ELEKTRONEN-EINFANG ENERGIE (MEV)	
	9	6	3	9.8733	0.0010	10599.6	1.0	106.5036	0.0014	9.7730	0.0013	-16.6651	1.7773
	8	7	1	0.1004	0.0009	107.7	0.9	115.4941	0.0013	-2.7596	0.0015	-9.7730	0.0013
	7	8	-1	2.8599	0.0013	3070.3	1.4	111.9521	0.0016	-15.7816	0.5514	2.7596	0.0015
	6	9	-3	18.6415	0.5514	20012.8	592.0	95.3881	0.5514	-21.5582	2.3917	15.7816	0.5514
	5	10	-5	40.1997	2.3273	43156.9	2498.5	73.0474	2.3273	-29.8399	4.7172	21.5582	2.3917
	4	11	-7	70.0395	4.1031	75191.8	4404.9	42.4251	4.1031	-38.1215	7.1692	29.8399	4.7172
	3	12	-9	108.1611	5.8790	116117.7	6311.4	3.5211	5.8790	-46.4032	9.6519	38.1215	7.1692
	2	13	-11	154.5643	7.6548	165934.5	8217.9	-43.6646	7.6548			46.4032	9.6519
16	16	0	16	247.7545	10.1358	265980.0	10881.4	-118.6115	10.1358	54.5360	13.1955		
	15	1	14	193.2186	8.4491	207432.3	9070.7	-64.8580	8.4491	54.7525	10.8222	-54.5360	13.1955
	14	2	12	138.4661	6.7625	148652.1	7260.0	-10.8880	6.7625	37.5735	8.4555	-54.7525	10.8222
	13	3	10	100.8927	5.0759	108314.6	5449.3	25.9030	5.0759	40.5735	6.1034	-37.5735	8.4555
	12	4	8	60.3192	3.3892	64756.5	3638.6	65.6940	3.3893	21.8135	3.7929	-40.5735	6.1034
	11	5	6	38.5058	1.7026	41338.4	1827.9	86.7250	1.7026	24.8135	1.7027	-21.8135	3.7929
	10	6	4	13.6923	0.0160	14699.6	17.1	110.7560	0.0160	8.0073	0.0164	-24.8135	1.7027
	9	7	2	5.6851	0.0035	6103.3	3.8	117.9808	0.0037	10.4217	0.0036	-8.0073	0.0164
	8	8	0	-4.7366	0.0004	-5085.0	0.4	127.6200	0.0011	-15.4226	0.0400	-10.4217	0.0036
	7	9	-2	10.6860	0.0400	11472.1	42.9	111.4150	0.0400	-15.6506	0.7332	15.4226	0.0400
	6	10	-4	26.3365	0.7322	28273.9	786.0	94.9820	0.7322	-30.1616	2.5272	15.6506	0.7332
	5	11	-6	56.4981	2.4188	60654.2	2596.7	64.0380	2.4188	-27.1616	4.7650	30.1616	2.5272
	4	12	-8	83.6596	4.1054	89813.9	4407.4	36.0940	4.1054	-45.9216	7.0994	27.1616	4.7650
	3	13	-10	129.5812	5.7920	139113.5	6218.1	-10.6100	5.7920			45.9216	7.0994
17	17	0	17	259.8498	11.2573	278965.0	12085.4	-122.6353	11.2573	58.9340	14.8282		
	16	1	15	200.9158	9.6513	215695.7	10361.2	-64.4838	9.6513	49.3963	12.5647	-58.9340	14.8282
	15	2	13	151.5196	8.0452	162665.7	8637.1	-15.8700	8.0452	42.4761	10.3048	-49.3963	12.5647
	14	3	11	109.0435	6.4392	117065.0	6912.9	25.8237	6.4392	36.1849	8.0512	-42.4761	10.3048
	13	4	9	72.8585	4.8331	78218.2	5188.7	61.2261	4.8331	28.7887	5.8115	-36.1849	8.0512
	12	5	7	44.0698	3.2271	47311.7	3464.5	89.2324	3.2271	21.3926	3.6114	-28.7887	5.8115
	11	6	5	22.6772	1.6210	24345.4	1740.3	109.8426	1.6210	14.8069	1.6211	-21.3926	3.6114
	10	7	3	7.8703	0.0150	8449.3	16.1	123.8670	0.0150	8.6780	0.0150	-14.8069	1.6211
	9	8	1	-0.8076	0.0009	-867.0	0.9	131.7625	0.0014	-2.7596	0.0010	-8.6780	0.0150
	8	9	-1	1.9519	0.0005	2095.5	0.6	128.2205	0.0012	-14.5581	0.2000	2.7596	0.0010
	7	10	-3	16.5100	0.2000	17724.5	214.7	112.8800	0.2000	-20.7190	1.8171	14.5581	0.2000
	6	11	-5	37.2290	1.8060	39967.6	1938.9	91.3786	1.8060	-27.1957	3.8606	20.7190	1.8171
	5	12	-7	64.4246	3.4121	69163.9	3663.1	63.4004	3.4121	-34.5918	6.0683	27.1957	3.8606
	4	13	-9	99.0165	5.0181	106300.4	5387.3	28.0261	5.0181	-41.9880	8.3103	34.5918	6.0683
	3	14	-11	141.0045	6.6242	151377.2	7111.5	-14.7443	6.6242			41.9880	8.3103
18	18	0	18	260.8778	11.1329	280068.7	11951.9	-115.5919	11.1329	52.7335	14.7002		
	17	1	16	208.1443	9.5996	223456.0	10305.8	-63.6409	9.5996	53.4203	12.5387	-52.7335	14.7002
	16	2	14	154.7240	8.0664	166105.9	8659.7	-11.0030	8.0664	37.1962	10.3802	-53.4203	12.5387

A	N	Z	N-Z	MASSEN-EXCESS (MEV)	MASSEN-EXCESS (MICRO-EINH.)	MASSEN-EXCESS (MICRO-EINH.)	BINDUNGS-ENERGIE (MEV)	BINDUNGS-ENERGIE (MEV)	NEGATONEN-ZERFALL ENERGIE (MEV)	NEGATONEN-ZERFALL ENERGIE (MEV)	ELEKTRONEN-EINFANG ENERGIE (MEV)	ELEKTRONEN-EINFANG ENERGIE (MEV)	
	15	3	12	117.5278	6.5331	126173.4	7013.7	25.4108	6.5331	40.4286	8.2268	-37.1962	10.3802
	14	4	10	77.0992	4.9998	82770.8	5367.6	65.0570	4.9998	24.5690	6.0840	-40.4286	8.2268
	13	5	8	52.5302	3.4665	56394.4	3721.6	88.8435	3.4665	27.7829	3.9692	-24.5690	6.0840
	12	6	6	24.7473	1.9333	26567.7	2075.5	115.8440	1.9333	11.6473	1.9742	-27.7829	3.9692
	11	7	4	13.1000	0.4000	14063.6	429.4	126.7088	0.4000	13.8824	0.4000	-11.6473	1.9742
	10	8	2	-0.7824	0.0005	-839.9	0.6	139.8087	0.0013	-1.6549	0.0010	-13.8824	0.4000
	9	9	0	0.8725	0.0008	936.7	0.9	137.3714	0.0014	-4.4469	0.0047	1.6549	0.0010
	8	10	-2	5.3193	0.0047	5710.6	5.0	132.1421	0.0048	-22.0649	1.0883	4.4469	0.0047
	7	11	-4	27.3842	1.0883	29398.6	1168.4	109.2948	1.0883	-17.9694	2.8385	22.0649	1.0883
	6	12	-6	45.3536	2.6216	48689.9	2814.4	90.5430	2.6216	-34.0410	4.9128	17.9694	2.8385
	5	13	-8	79.3945	4.1549	85235.0	4460.5	55.7195	4.1549	-30.8271	7.0440	34.0410	4.9128
	4	14	-10	110.2217	5.6881	118329.8	6106.6	24.1100	5.6881			30.8271	7.0440
19	19	0	19	263.6482	11.7436	283042.8	12607.5	-110.2908	11.7436	55.8130	15.6048		
	18	1	17	207.8352	10.2760	223124.1	11032.0	-55.2603	10.2760	46.8388	13.5346	-55.8130	15.6048
	17	2	15	160.9964	8.8085	172839.7	9456.5	-9.2039	8.8085	40.9757	11.4664	-46.8388	13.5346
	16	3	13	120.0207	7.3409	128849.8	7881.0	30.9893	7.3409	34.9641	9.4014	-40.9757	11.4664
	15	4	11	85.0567	5.8734	91313.7	6305.5	65.1709	5.8734	28.6749	7.3422	-34.9641	9.4014
	14	5	9	56.3817	4.4058	60529.3	4729.9	93.0634	4.4058	23.4353	5.2958	-28.6749	7.3422
	13	6	7	32.9465	2.9383	35370.1	3154.4	115.7162	2.9383	17.9382	3.2858	-23.4353	5.2958
	12	7	5	15.0083	1.4707	16112.3	1573.9	132.8719	1.4707	11.6755	1.4707	-17.9382	3.2858
	11	8	3	3.3328	0.0029	3577.9	3.2	143.7650	0.0032	4.8188	0.0030	-11.6755	1.4707
	10	9	1	-1.4860	0.0007	-1595.3	0.7	147.8013	0.0014	-3.2381	0.0017	-4.8188	0.0030
	9	10	-1	1.7521	0.0016	1880.9	1.7	143.7808	0.0020	-11.1454	0.5110	3.2381	0.0017
	8	11	-3	12.8974	0.5110	13846.2	548.6	131.8530	0.5110	-18.4076	2.0435	11.1454	0.5110
	7	12	-5	31.3050	1.9786	33607.9	2124.1	112.6629	1.9786	-24.6703	3.9737	18.4076	2.0435
	6	13	-7	55.9753	3.4461	60093.0	3699.6	87.2102	3.4461	-30.1484	6.0016	24.6703	3.9737
	5	14	-9	86.1237	4.9137	92459.2	5275.1	56.2794	4.9137	-34.8310	8.0538	30.1484	6.0016
	4	15	-11	120.9547	6.3812	129852.5	6850.6	20.6659	6.3812			34.8310	8.0538
20	19	1	18	217.3399	9.8653	233327.9	10591.0	-56.6935	9.8653	51.2515	12.9941		
	18	2	16	166.0884	8.4571	178306.3	9079.2	-6.2245	8.4571	36.4210	11.0095	-51.2515	12.9941
	17	3	14	129.6675	7.0489	139206.1	7567.5	29.4140	7.0489	39.8360	9.0280	-36.4210	11.0095
	16	4	12	89.8315	5.6407	96439.7	6055.7	68.4675	5.6407	24.8255	7.0521	-39.8360	9.0280
	15	5	10	65.0061	4.2325	69788.1	4543.9	92.5105	4.2325	28.2090	5.0884	-24.8255	7.0521
	14	6	8	36.7971	2.8244	39504.0	3032.1	119.9370	2.8244	14.7940	3.1595	-28.2090	5.0884
	13	7	6	22.0032	1.4162	23621.8	1520.4	133.9485	1.4162	18.2040	1.4162	-14.7940	3.1595
	12	8	4	3.7992	0.0079	4078.7	8.5	151.3700	0.0080	3.8111	0.0092	-18.2040	1.4162
	11	9	2	-0.0119	0.0047	-12.7	5.1	154.3986	0.0049	7.0297	0.0047	-3.8111	0.0092
	10	10	0	-7.0415	0.0002	-7559.5	0.2	160.6458	0.0013	-13.9015	0.0500	-7.0297	0.0047
	9	11	-2	6.8600	0.0500	7364.6	53.7	145.9619	0.0500	-10.5835	0.6772	13.9015	0.0500
	8	12	-4	17.4434	0.6754	18726.6	725.0	134.5960	0.6754	-25.3461	2.1903	10.5835	0.6772

A	N	Z	N-Z	MASSEN-EXCESS (MEV)		MASSEN-EXCESS (MICRO-EINH.)		BINDUNGS-ENERGIE (MEV)		NEGATONEN-ZERFALL ENERGIE(MEV)		ELEKTRONEN-EINFANG ENERGIE(MEV)	
	7	13	-6	42.7895	2.0836	45937.2	2236.8	108.4675	2.0836	-21.9361	4.0661	25.3461	2.1903
	6	14	-8	64.7255	3.4917	69486.9	3748.6	85.7490	3.4917	-34.8016	6.0168	21.9361	4.0661
	5	15	-10	99.5271	4.8999	106848.5	5260.4	50.1650	4.8999			34.8016	6.0168
21	20	1	19	227.3871	10.8435	244114.3	11641.2	-58.6693	10.8435	47.3057	14.4091		
	19	2	17	180.0813	9.4889	193328.6	10187.0	-12.1460	9.4889	42.0095	12.4983	-47.3057	14.4091
	18	3	15	138.0718	8.1344	148228.8	8732.8	29.0811	8.1344	36.3188	10.5893	-42.0095	12.4983
	17	4	13	101.7530	6.7798	109238.2	7278.6	64.6174	6.7798	30.6281	8.6833	-36.3188	10.5893
	16	5	11	71.1249	5.4253	76357.1	5824.3	94.4631	5.4253	25.1204	6.7826	-30.6281	8.6833
	15	6	9	46.0046	4.0707	49388.8	4370.1	118.8010	4.0707	20.1347	4.8937	-25.1204	6.7826
	14	7	7	25.8699	2.7161	27772.9	2915.9	138.1532	2.7161	15.5440	3.0383	-20.1347	4.8937
	13	8	5	10.3259	1.3616	11085.5	1461.7	152.9147	1.3616	10.3717	1.3616	-15.5440	3.0383
	12	9	3	-0.0458	0.0069	-49.2	7.4	162.5040	0.0070	5.6841	0.0070	-10.3717	1.3616
	11	10	1	-5.7299	0.0015	-6151.4	1.6	167.4056	0.0020	-3.5452	0.0080	-5.6841	0.0070
	10	11	-1	-2.1847	0.0079	-2345.4	8.5	163.0780	0.0080	-13.0848	0.2002	3.5452	0.0080
	9	12	-3	10.9000	0.2000	11701.9	214.7	149.2108	0.2000	-17.5728	1.5674	13.0848	0.2002
	8	13	-5	28.4729	1.5546	30567.4	1668.9	130.8555	1.5546	-23.0961	3.2984	17.5728	1.5674
	7	14	-7	51.5689	2.9091	55362.5	3123.1	106.9770	2.9091	-27.4368	5.1616	23.0961	3.2984
	6	15	-9	79.0057	4.2637	84817.6	4577.3	78.7578	4.2637	-32.1495	7.0529	27.4368	5.1616
	5	16	-11	111.1552	5.6183	119332.0	6031.5	45.8259	5.6183			32.1495	7.0529
22	21	1	20	245.4695	10.5090	263526.8	11282.1	-68.6802	10.5090	52.7172	13.9690		
	20	2	18	192.7522	9.2029	206931.6	9879.9	-16.7455	9.2029	39.2755	12.1265	-52.7172	13.9690
	19	3	16	153.4767	7.8968	164766.9	8477.7	21.7476	7.8968	42.4178	10.2857	-39.2755	12.1265
	18	4	14	111.0590	6.5906	119228.8	7075.5	63.3829	6.5906	28.1200	8.4476	-42.4178	10.2857
	17	5	12	82.9389	5.2845	89040.1	5673.3	90.7205	5.2845	31.2623	6.6147	-28.1200	8.4476
	16	6	10	51.6766	3.9784	55478.1	4271.0	121.2004	3.9784	17.8526	4.7925	-31.2623	6.6147
	15	7	8	33.8240	2.6723	36312.2	2868.8	138.2705	2.6723	21.0084	3.0012	-17.8526	4.7925
	14	8	6	12.8157	1.3661	13758.4	1466.6	158.4964	1.3661	8.3156	1.3674	-21.0084	3.0012
	13	9	4	4.5000	0.0600	4831.1	64.4	166.0296	0.0600	12.5250	0.0600	-8.3156	1.3674
	12	10	2	-8.0249	0.0004	-8615.3	0.4	177.7721	0.0015	-2.8428	0.0027	-12.5250	0.0600
	11	11	0	-5.1822	0.0026	-5563.4	2.8	174.1469	0.0030	-4.8022	0.0501	2.8428	0.0027
	10	12	-2	-0.3800	0.0500	-408.0	53.7	168.5623	0.0500	-20.0403	0.7134	4.8022	0.0501
	9	13	-4	19.6602	0.7117	21106.5	764.0	147.7396	0.7117	-15.8957	2.1396	20.0403	0.7134
	8	14	-6	35.5560	2.0178	38171.6	2166.2	131.0614	2.0178	-28.7020	3.8884	15.8957	2.1396
	7	15	-8	64.2579	3.3239	68984.9	3568.4	101.5770	3.3239	-25.5462	5.6996	28.7020	3.8884
	6	16	-10	89.8041	4.6300	96410.3	4970.6	75.2484	4.6300			25.5462	5.6996
23	22	1	21	260.3896	11.3651	279544.6	12201.1	-75.5290	11.3651	50.2256	15.2063		
	21	2	19	210.1640	10.1027	225624.2	10845.9	-26.0858	10.1027	45.1223	13.4245	-50.2256	15.2063
	20	3	17	165.0418	8.8403	177182.7	9490.7	18.2540	8.8403	40.0629	11.6438	-45.1223	13.4245
	19	4	15	124.9789	7.5780	134172.6	8135.4	57.5345	7.5780	34.5536	9.8647	-40.0629	11.6438
	18	5	13	90.4253	6.3156	97077.2	6780.2	91.3056	6.3156	29.0442	8.0884	-34.5536	9.8647

A	N	Z	N-Z	MASSEN-EXCESS (MEV)	MASSEN-EXCESS (MICRO-EINH.)	BINDUNGS-ENERGIE (MEV)	NEGATONEN-ZERFALL ENERGIE (MEV)	ELEKTRONEN-EINFANG ENERGIE (MEV)					
	17	6	11	61.3811	5.0532	65896.5	5424.9	119.5673	5.0532	24.1454	6.3171	-29.0442	8.0884
	16	7	9	37.2357	3.7908	39974.9	4069.7	142.9302	3.7908	18.9270	4.5567	-24.1454	6.3171
	15	8	7	18.3087	2.5285	19655.5	2714.5	161.0748	2.5285	13.9177	2.8277	-18.9270	4.5567
	14	9	5	4.3910	1.2661	4714.1	1359.2	174.2100	1.2661	9.5393	1.2661	-13.9177	2.8277
	13	10	3	-5.1483	0.0034	-5527.0	3.6	182.9669	0.0037	4.3801	0.0039	-9.5393	1.2661
	12	11	1	-9.5283	0.0019	-10229.3	2.0	186.5645	0.0024	-4.0560	0.0035	-4.3801	0.0039
	11	12	-1	-5.4724	0.0030	-5874.9	3.2	181.7261	0.0033	-12.1628	0.4877	4.0560	0.0035
	10	13	-3	6.6904	0.4877	7182.5	523.6	168.7809	0.4877	-17.4984	1.8168	12.1628	0.4877
	9	14	-5	24.1888	1.7501	25968.2	1878.8	150.5000	1.7501	-21.8128	3.4840	17.4984	1.8168
	8	15	-7	46.0016	3.0125	49385.6	3234.1	127.9048	3.0125	-27.0121	5.2297	21.8128	3.4840
	7	16	-9	73.0137	4.2749	78384.8	4589.3	100.1102	4.2749	-32.0025	6.9954	27.0121	5.2297
	6	17	-11	105.0161	5.5372	112741.4	5944.6	67.3253	5.5372			32.0025	6.9954
24	22	2	20	225.1607	9.7929	241724.1	10513.2	-33.0110	9.7929	43.0310	13.0133		
	21	3	18	182.1297	8.5700	195527.7	9200.4	9.2375	8.5700	45.7645	11.2883	-43.0310	13.0133
	20	4	16	136.3653	7.3471	146396.7	7887.6	54.2195	7.3471	32.5710	9.5649	-45.7645	11.2883
	19	5	14	103.7943	6.1243	111429.7	6574.8	86.0080	6.1243	35.3160	7.8442	-32.5710	9.5649
	18	6	12	68.4784	4.9014	73515.8	5262.0	120.5415	4.9014	22.2715	6.1283	-35.3160	7.8442
	17	7	10	46.2069	3.6786	49606.0	3949.2	142.0305	3.6786	25.0615	4.4229	-22.2715	6.1283
	16	8	8	21.1455	2.4557	22701.0	2636.4	166.3095	2.4557	12.1525	2.7478	-25.0615	4.4229
	15	9	6	8.9930	1.2329	9654.6	1323.5	177.6795	1.2329	14.9420	1.2329	-12.1525	2.7478
	14	10	4	-5.9489	0.0099	-6386.6	10.6	191.8390	0.0100	2.4695	0.0104	-14.9420	1.2329
	13	11	2	-8.4184	0.0032	-9037.7	3.5	193.5260	0.0036	5.5149	0.0038	-2.4695	0.0104
	12	12	0	-13.9332	0.0020	-14958.2	2.1	198.2584	0.0025	-13.8823	0.0073	-5.5149	0.0038
	11	13	-2	-0.0510	0.0070	-54.7	7.6	183.5937	0.0072	-10.7783	0.6500	13.8823	0.0073
	10	14	-4	10.7273	0.6499	11516.4	697.8	172.0330	0.6499	-23.1976	1.9824	10.7783	0.6500
	9	15	-6	33.9248	1.8728	36420.4	2010.6	148.0530	1.8728	-20.4081	3.6181	23.1976	1.9824
	8	16	-8	54.3329	3.0957	58329.7	3323.4	126.8625	3.0957	-33.2786	5.3134	20.4081	3.6181
	7	17	-10	87.6114	4.3185	94056.3	4636.2	92.8015	4.3185			33.2786	5.3134
25	23	2	21	246.2346	10.6934	264348.3	11480.0	-46.0135	10.6934	49.1310	14.3080		
	22	3	19	197.1037	9.5063	211603.1	10205.6	2.3350	9.5063	43.7145	12.6324	-49.1310	14.3080
	21	4	17	153.3892	8.3191	164672.9	8931.1	45.2670	8.3191	38.2980	10.9577	-43.7145	12.6324
	20	5	15	115.0913	7.1319	123557.7	7656.6	82.7825	7.1319	33.3660	9.2847	-38.2980	10.9577
	19	6	13	81.7253	5.9448	87737.2	6382.1	115.3660	5.9448	28.5715	7.6142	-33.3660	9.2847
	18	7	11	53.1539	4.7576	57064.0	5107.6	143.1550	4.7576	23.2115	5.9484	-28.5715	7.6142
	17	8	9	29.9424	3.5705	32145.0	3833.1	165.5840	3.5705	18.2750	4.2928	-23.2115	5.9484
	16	9	7	11.6675	2.3833	12525.7	2558.6	183.0765	2.3833	13.1920	2.6666	-18.2750	4.2928
	15	10	5	-1.5245	1.1962	-1636.6	1284.1	195.4860	1.1962	7.8315	1.1962	-13.1920	2.6666
	14	11	3	-9.3560	0.0088	-10044.2	9.5	202.5350	0.0090	3.8348	0.0091	-7.8315	1.1962
	13	12	1	-13.1907	0.0020	-14161.0	2.2	205.5873	0.0026	-4.2599	0.0071	-3.8348	0.0091
	12	13	-1	-8.9309	0.0068	-9587.8	7.3	200.5450	0.0070	-12.9309	0.2001	4.2599	0.0071



A	N	Z	N-Z	MASSEN-EXCESS (MEV)		MASSEN-EXCESS (MICRO-EINH.)		BINDUNGS-ENERGIE (MEV)		NEGATONEN-ZERFALL ENERGIE (MEV)		ELEKTRONEN-EINFANG ENERGIE (MEV)	
	11	14	-3	4.0000	0.2000	4294.3	214.7	186.8317	0.2000	-16.4476	1.4015	12.9309	0.2001
	10	15	-5	20.4476	1.3872	21951.7	1489.2	169.6017	1.3872	-21.8081	2.9243	16.4476	1.4015
	9	16	-7	42.2556	2.5743	45364.0	2763.7	147.0112	2.5743	-26.7251	4.5580	21.8081	2.9243
	8	17	-9	68.9807	3.7615	74055.1	4038.2	119.5037	3.7615	-31.7886	6.2159	26.7251	4.5580
	7	18	-11	100.7692	4.9486	108182.1	5312.7	86.9327	4.9486			31.7886	6.2159
26	24	2	22	262.9029	10.6942	282242.7	11480.9	-54.6103	10.6942	47.2633	14.3305		
	23	3	20	215.6396	9.5393	231502.6	10241.0	-8.1295	9.5393	49.6129	12.7002	-47.2633	14.3305
	22	4	18	166.0267	8.3844	178240.1	9001.1	40.7009	8.3844	36.5226	11.0708	-49.6129	12.7002
	21	5	16	129.5041	7.2295	139030.8	7761.3	76.4411	7.2295	38.8722	9.4427	-36.5226	11.0708
	20	6	14	90.6319	6.0745	97299.0	6521.4	114.5308	6.0745	26.8884	7.8168	-38.8722	9.4427
	19	7	12	63.7435	4.9196	68432.7	5281.5	140.6368	4.9196	29.2945	6.1948	-26.8884	7.8168
	18	8	10	34.4490	3.7647	36983.2	4041.7	169.1488	3.7647	16.6842	4.5809	-29.2945	6.1948
	17	9	8	17.7648	2.6098	19071.6	2801.8	185.0506	2.6098	19.1213	2.9880	-16.6842	4.5809
	16	10	6	-1.3565	1.4549	-1456.3	1561.9	203.3895	1.4549	6.3330	1.4855	-19.1213	2.9880
	15	11	4	-7.6895	0.3000	-8255.2	322.1	208.9400	0.3000	8.5247	0.3000	-6.3330	1.4855
	14	12	2	-16.2142	0.0020	-17406.9	2.1	216.6822	0.0026	-4.0034	0.0031	-8.5247	0.3000
	13	13	0	-12.2108	0.0024	-13109.1	2.5	211.8964	0.0029	-5.0780	0.0131	4.0034	0.0031
	12	14	-2	-7.1329	0.0129	-7657.6	13.8	206.0360	0.0130	-21.7226	0.9313	5.0780	0.0131
	11	15	-4	14.5897	0.9313	15662.9	999.8	183.5310	0.9313	-15.3096	2.2846	21.7226	0.9313
	10	16	-6	29.8993	2.0862	32098.8	2239.6	167.4390	2.0862	-27.9004	3.8544	15.3096	2.2846
	9	17	-8	57.7997	3.2411	62051.6	3479.5	138.7561	3.2411	-25.4633	5.4616	27.9004	3.8544
	8	18	-10	83.2630	4.3960	89388.0	4719.4	112.5103	4.3960			25.4633	5.4616
27	24	3	21	232.7530	10.1362	249874.9	10881.9	-17.1714	10.1362	47.7811	13.5621		
	23	4	19	184.9718	9.0104	198578.8	9673.3	29.8272	9.0104	42.4535	11.9731	-47.7811	13.5621
	22	5	17	142.5183	7.8847	153002.4	8464.7	71.4983	7.8847	37.1259	10.3851	-42.4535	11.9731
	21	6	15	105.3924	6.7589	113145.4	7256.1	107.8417	6.7589	32.4548	8.7985	-37.1259	10.3851
	20	7	13	72.9377	5.6331	78303.1	6047.5	139.5141	5.6331	27.6337	7.2144	-32.4548	8.7985
	19	8	11	45.3040	4.5073	48636.7	4838.9	166.3653	4.5073	22.7861	5.6348	-27.6337	7.2144
	18	9	9	22.5179	3.3815	24174.4	3630.3	188.3689	3.3815	17.5460	4.0649	-22.7861	5.6348
	17	10	7	4.9720	2.2558	5337.7	2421.7	205.1324	2.2558	12.3058	2.5230	-17.5460	4.0649
	16	11	5	-7.3339	1.1300	-7873.4	1213.1	216.6558	1.1300	7.2487	1.1300	-12.3058	2.5230
	15	12	3	-14.5826	0.0038	-15655.4	4.1	223.1221	0.0042	2.6135	0.0043	-7.2487	1.1300
	14	13	1	-17.1961	0.0019	-18461.1	2.1	224.9531	0.0026	-4.8102	0.0033	-2.6135	0.0043
	13	14	-1	-12.3859	0.0027	-13297.1	2.9	219.3605	0.0032	-14.9535	0.4751	4.8102	0.0033
	12	15	-3	2.5675	0.4751	2756.4	510.0	203.6246	0.4751	-16.5858	1.6699	14.9535	0.4751
	11	16	-5	19.1534	1.6008	20562.3	1718.6	186.2563	1.6009	-21.4139	3.1618	16.5858	1.6699
	10	17	-7	40.5673	2.7266	43551.5	2927.2	164.0599	2.7266	-26.6541	4.7197	21.4139	3.1618
	9	18	-9	67.2214	3.8524	72166.3	4135.8	136.6234	3.8524	-31.8942	6.2947	26.6541	4.7197
	8	19	-11	99.1155	4.9782	106406.7	5344.4	103.9468	4.9782			31.8942	6.2947
28	25	3	22	250.0010	9.9012	268391.7	10629.6	-26.3480	9.9012	52.6159	13.2478		

A	N	Z	N-Z	MASSEN-EXCESS (MEV)	MASSEN-EXCESS (MICRO-EINH.)	BINDUNGS-ENERGIE (MEV)	NEGATONEN-ZERFALL ENERGIE (MEV)	ELEKTRONEN-EINFANG ENERGIE (MEV)					
	24	4	20	197.3851	8.8017	211905.3	9449.2	25.4854	8.8017	40.0465	11.6960	-52.6159	13.2478
	23	5	18	157.3386	7.7023	168912.8	8268.9	64.7495	7.7023	42.1972	10.1450	-40.0465	11.6960
	22	6	16	115.1414	6.6028	123611.5	7088.5	106.1642	6.6028	30.2843	8.5956	-42.1972	10.1450
	21	7	14	84.8571	5.5033	91099.4	5908.2	135.6661	5.5033	32.4800	7.0485	-30.2843	8.5956
	20	8	12	52.3772	4.4039	56230.2	4727.8	167.3636	4.4039	20.8521	5.5057	-32.4800	7.0485
	19	9	10	31.5251	3.3044	33844.1	3547.5	187.4332	3.3044	23.0902	3.9725	-20.8521	5.5057
	18	10	8	8.4348	2.2049	9055.3	2367.1	209.7410	2.2049	10.6084	2.4665	-23.0902	3.9725
	17	11	6	-2.1736	1.1055	-2333.4	1186.8	219.5669	1.1055	12.8465	1.1055	-10.6084	2.4665
	16	12	4	-15.0201	0.0057	-16125.0	6.1	231.6310	0.0060	1.8353	0.0068	-12.8465	1.1055
	15	13	2	-16.8553	0.0038	-18095.3	4.1	232.6838	0.0042	4.6346	0.0048	-1.8353	0.0068
	14	14	0	-21.4899	0.0029	-23070.7	3.1	236.5359	0.0034	-14.3379	0.0085	-4.6346	0.0048
	13	15	-2	-7.1520	0.0080	-7678.2	8.6	221.4156	0.0082	-15.8532	0.6310	14.3379	0.0085
	12	16	-4	8.7011	0.6309	9341.2	677.3	204.7800	0.6309	-22.2836	1.8418	15.8532	0.6310
	11	17	-6	30.9848	1.7304	33264.1	1857.7	181.7139	1.7304	-20.0455	3.3170	22.2836	1.8418
	10	18	-8	51.0302	2.8298	54784.1	3038.0	160.8860	2.8298	-32.5273	4.8423	20.0455	3.3170
	9	19	-10	83.5576	3.9293	89704.3	4218.4	127.5762	3.9293			32.5273	4.8423
29	26	3	23	255.2509	10.7640	274027.8	11555.8	-23.5265	10.7640	48.7972	14.4820		
	25	4	21	206.4537	9.6883	221641.0	10401.0	24.4883	9.6883	43.8083	12.9630	-48.7972	14.4820
	24	5	19	162.6454	8.6126	174610.0	9246.2	67.5141	8.6126	38.8194	11.4447	-43.8083	12.9630
	23	6	17	123.8260	7.5369	132935.0	8091.3	105.5510	7.5369	34.4870	9.9274	-38.8194	11.4447
	22	7	15	89.3391	6.4612	95911.1	6936.5	139.2556	6.4612	29.5431	8.4114	-34.4870	9.9274
	21	8	13	59.7960	5.3855	64194.7	5781.7	168.0162	5.3855	25.0456	6.8977	-29.5431	8.4114
	20	9	11	34.7504	4.3098	37306.7	4626.8	192.2794	4.3098	20.5942	5.3883	-25.0456	6.8977
	19	10	9	14.1561	3.2341	15197.5	3472.0	212.0911	3.2341	15.6928	3.8882	-20.5942	5.3883
	18	11	7	-1.5367	2.1584	-1649.7	2317.2	227.0015	2.1584	10.7914	2.4147	-15.6928	3.8882
	17	12	5	-12.3281	1.0827	-13235.0	1162.3	237.0105	1.0827	5.8900	1.0827	-10.7914	2.4147
	16	13	3	-18.2181	0.0067	-19558.3	7.2	242.1180	0.0070	3.6756	0.0077	-5.8900	1.0827
	15	14	1	-21.8936	0.0038	-23504.2	4.0	245.0111	0.0042	-4.9487	0.0068	-3.6756	0.0077
	14	15	-1	-16.9450	0.0057	-18191.5	6.1	239.2800	0.0060	-14.0450	0.2001	4.9487	0.0068
	13	16	-3	-2.9000	0.2000	-3113.4	214.7	224.4526	0.2000	-15.6561	1.2913	14.0450	0.2001
	12	17	-5	12.7561	1.2757	13694.4	1369.5	208.0141	1.2757	-20.5575	2.6752	15.6561	1.2913
	11	18	-7	33.3136	2.3514	35764.2	2524.4	186.6741	2.3514	-25.4589	4.1562	20.5575	2.6752
	10	19	-9	58.7725	3.4271	63095.9	3679.2	160.4327	3.4271	-30.3603	5.6586	25.4589	4.1562
	9	20	-11	89.1328	4.5028	95689.6	4834.0	129.2900	4.5028			30.3603	5.6586
30	26	4	22	207.8154	9.7381	223102.9	10454.5	31.1980	9.7381	39.7446	13.0477		
	25	5	20	168.0708	8.6839	180434.5	9322.7	70.1601	8.6839	42.0148	11.5595	-39.7446	13.0477
	24	6	18	126.0560	7.6297	135329.0	8190.9	111.3925	7.6297	30.9415	10.0721	-42.0148	11.5595
	23	7	16	95.1146	6.5754	102111.5	7059.1	141.5515	6.5754	33.2566	8.5860	-30.9415	10.0721
	22	8	14	61.8580	5.5212	66408.4	5927.3	174.0257	5.5212	22.0183	7.1019	-33.2566	8.5860
	21	9	12	39.8397	4.4670	42770.4	4795.6	195.2615	4.4670	24.3645	5.6214	-22.0183	7.1019

A	N	Z	N-Z	MASSEN-EXCESS (MEV)		MASSEN-EXCESS (MICRO-EINH.)		BINDUNGS-ENERGIE (MEV)		NEGATONEN-ZERFALL ENERGIE (MEV)		ELEKTRONEN-EINFANG ENERGIE (MEV)	
	20	10	10	15.4752	3.4127	16613.6	3663.8	218.8435	3.4127	13.1836	4.1484	-24.3645	5.6214
	19	11	8	2.2916	2.3585	2460.2	2532.0	231.2447	2.3585	15.5413	2.6951	-13.1836	4.1484
	18	12	6	-13.2497	1.3042	-14224.4	1400.2	246.0035	1.3042	3.8990	1.3280	-15.5413	2.6951
	17	13	4	-17.1487	0.2500	-18410.2	268.4	249.1200	0.2500	7.2908	0.2500	-3.8990	1.3280
	16	14	2	-24.4394	0.0038	-26237.2	4.1	255.6283	0.0043	-4.2429	0.0087	-7.2908	0.2500
	15	15	0	-20.1966	0.0078	-21682.3	8.3	250.6030	0.0080	-6.1396	0.0169	4.2429	0.0087
	14	16	-2	-14.0570	0.0150	-15091.1	16.1	243.6810	0.0151	-22.3626	0.8705	6.1396	0.0169
	13	17	-4	8.3056	0.8704	8916.5	934.4	220.5360	0.8704	-13.9941	2.1123	22.3626	0.8705
	12	18	-6	22.2996	1.9246	23940.0	2066.2	205.7595	1.9246	-25.6364	3.5465	13.9941	2.1123
	11	19	-8	47.9360	2.9788	51462.3	3198.0	179.3407	2.9788	-23.2787	5.0139	25.6364	3.5465
	10	20	-10	71.2147	4.0331	76453.5	4329.8	155.2795	4.0331			23.2787	5.0139
31	27	4	23	209.2258	10.3546	224617.0	11116.3	37.8590	10.3546	42.0947	13.9310		
	26	5	21	167.1311	9.3197	179425.7	10005.3	79.1713	9.3197	37.6524	12.4698	-42.0947	13.9310
	25	6	19	129.4787	8.2848	139003.5	8894.3	116.0413	8.2849	33.8666	11.0091	-37.6524	12.4698
	24	7	17	95.6121	7.2500	102645.5	7783.3	149.1254	7.2500	29.4693	9.5494	-33.8666	11.0091
	23	8	15	66.1428	6.2151	71008.4	6672.3	177.8123	6.2151	25.5185	8.0909	-29.4693	9.5494
	22	9	13	40.6243	5.1803	43612.7	5561.4	202.5483	5.1803	21.1522	6.6347	-25.5185	8.0909
	21	10	11	19.4721	4.1454	20904.5	4450.4	222.9181	4.1454	16.7859	5.1827	-21.1522	6.6347
	20	11	9	2.6862	3.1106	2883.8	3339.4	238.9215	3.1106	12.9041	3.7395	-16.7859	5.1827
	19	12	7	-10.2179	2.0757	-10969.6	2228.4	251.0432	2.0757	8.5493	2.3221	-12.9041	3.7395
	18	13	5	-18.7672	1.0409	-20147.8	1117.4	258.8100	1.0409	4.1945	1.0409	-8.5493	2.3221
	17	14	3	-22.9617	0.0056	-24650.8	6.1	262.2220	0.0060	1.4760	0.0058	-4.1945	1.0409
	16	15	1	-24.4376	0.0015	-26235.3	1.6	262.9155	0.0025	-5.4451	0.0109	-1.4760	0.0058
	15	16	-1	-18.9926	0.0108	-20389.7	11.6	256.6880	0.0110	-12.8526	0.4701	5.4451	0.0109
	14	17	-3	-6.1400	0.4700	-6591.7	504.5	243.0530	0.4700	-14.6186	1.5765	12.8526	0.4701
	13	18	-5	8.4786	1.5048	9102.3	1615.5	227.6520	1.5048	-18.9734	2.9520	14.6186	1.5765
	12	19	-7	27.4519	2.5397	29471.4	2726.5	207.8962	2.5397	-23.3282	4.3849	18.9734	2.9520
	11	20	-9	50.7801	3.5745	54515.6	3837.5	183.7855	3.5745	-26.8170	5.8330	23.3282	4.3849
	10	21	-11	77.5971	4.6094	83305.4	4948.5	156.1861	4.6094			26.8170	5.8330
32	28	4	24	208.9315	10.1809	224301.0	10929.8	46.2248	10.1809	37.7780	13.6974		
	27	5	22	171.1535	9.1635	183744.0	9837.6	83.2203	9.1635	40.2265	12.2609	-37.7780	13.6974
	26	6	20	130.9271	8.1461	140558.4	8745.4	122.6643	8.1461	30.0515	10.8249	-40.2265	12.2609
	25	7	18	100.8756	7.1288	108296.3	7653.2	151.9333	7.1288	32.5450	9.3898	-30.0515	10.8249
	24	8	16	68.3307	6.1114	73357.3	6561.0	183.6958	6.1114	22.2050	7.9561	-32.5450	9.3898
	23	9	14	46.1257	5.0941	49518.9	5468.8	205.1183	5.0941	24.7295	6.5245	-22.2050	7.9561
	22	10	12	21.3963	4.0767	22970.2	4376.6	229.0653	4.0767	13.9740	5.0970	-24.7295	6.5245
	21	11	10	7.4223	3.0594	7968.3	3284.4	242.2568	3.0594	16.4985	3.6783	-13.9740	5.0970
	20	12	8	-9.0761	2.0420	-9743.8	2192.2	257.9728	2.0420	6.2390	2.2847	-16.4985	3.6783
	19	13	6	-15.3151	1.0247	-16441.7	1100.0	263.4293	1.0247	8.7750	1.0247	-6.2390	2.2847
	18	14	4	-24.0900	0.0070	-25862.1	7.5	271.4218	0.0073	0.2127	0.0073	-8.7750	1.0247

A	N	Z	N-Z	MASSEN-EXCESS (MEV)		MASSEN-EXCESS (MICRO-EINH.)		BINDUNGS-ENERGIE (MEV)		NEGATONEN-ZERFALL ENERGIE (MEV)		ELEKTRONEN-EINFANG ENERGIE (MEV)	
	17	15	2	-24.3027	0.0022	-26090.4	2.3	270.8520	0.0030	1.7101	0.0024	-0.2127	0.0073
	16	16	0	-26.0127	0.0010	-27926.3	1.1	271.7796	0.0023	-12.7548	0.0131	-1.7101	0.0024
	15	17	-2	-13.2580	0.0130	-14233.3	14.0	258.2424	0.0132	-12.3512	0.6247	12.7548	0.0131
	14	18	-4	-0.9068	0.6245	-973.5	670.5	245.1088	0.6245	-19.5281	1.7566	12.3512	0.6247
	13	19	-6	18.6212	1.6419	19991.1	1762.7	224.7983	1.6419	-16.9921	3.1253	19.5281	1.7566
	12	20	-8	35.6133	2.6592	38233.1	2854.9	207.0238	2.6592	-26.8701	4.5375	16.9921	3.1253
	11	21	-10	62.4833	3.6766	67079.8	3947.1	179.3713	3.6766	-24.3456	5.9624	26.8701	4.5375
	10	22	-12	86.8289	4.6940	93216.2	5039.2	154.2433	4.6940			24.3456	5.9624
33	28	5	23	173.0895	10.0199	185822.4	10757.0	89.3558	10.0199	36.6421	13.4806		
	27	6	21	136.4475	9.0183	146484.9	9681.7	125.2154	9.0183	33.2942	12.0664	-36.6421	13.4806
	26	7	19	103.1533	8.0168	110741.5	8606.5	157.7271	8.0168	29.3348	10.6528	-33.2942	12.0664
	25	8	17	73.8185	7.0152	79248.8	7531.3	186.2794	7.0152	25.8219	9.2400	-29.3348	10.6528
	24	9	15	47.9966	6.0136	51527.3	6456.0	211.3189	6.0136	21.8935	7.8285	-25.8219	9.2400
	23	10	13	26.1030	5.0121	28023.2	5380.8	232.4300	5.0121	17.9652	6.4191	-21.8935	7.8285
	22	11	11	8.1379	4.0105	8736.5	4305.6	249.6127	4.0105	14.0368	5.0138	-17.9652	6.4191
	21	12	9	-5.8989	3.0090	-6332.9	3230.3	262.8671	3.0090	10.1084	3.6171	-14.0368	5.0138
	20	13	7	-16.0074	2.0074	-17184.9	2155.1	272.1930	2.0074	6.6875	2.2453	-10.1084	3.6171
	19	14	5	-22.6949	1.0059	-24364.4	1079.8	278.0981	1.0059	3.6397	1.0059	-6.6875	2.2453
	18	15	3	-26.3345	0.0037	-28271.8	4.0	280.9553	0.0043	0.2481	0.0049	-3.6397	1.0059
	17	16	1	-26.5826	0.0031	-28538.1	3.4	280.4209	0.0038	-5.5685	0.0122	-0.2481	0.0049
	16	17	-1	-21.0141	0.0118	-22560.0	12.7	274.0700	0.0120	-11.4142	0.2003	5.5685	0.0122
	15	18	-3	-9.6000	0.2000	-10306.2	214.7	261.8734	0.2000	-14.9208	1.2181	11.4142	0.2003
	14	19	-5	5.3208	1.2016	5712.2	1289.9	246.1702	1.2016	-17.7696	2.5095	14.9208	1.2181
	13	20	-7	23.0904	2.2031	24789.0	2365.2	227.6181	2.2031	-20.8205	3.8889	17.7696	2.5095
	12	21	-9	43.9109	3.2047	47141.1	3440.4	206.0152	3.2047	-24.7489	5.2879	20.8205	3.8889
	11	22	-11	68.6598	4.2062	73710.6	4515.6	180.4838	4.2062			24.7489	5.2879
34	29	5	24	187.1311	10.0730	200897.0	10814.0	83.3856	10.0730	44.1383	13.5652		
	28	6	22	142.9929	9.0857	153511.8	9754.1	126.7414	9.0857	30.5979	12.1710	-44.1383	13.5652
	27	7	20	112.3949	8.0984	120663.0	8694.1	156.5569	8.0984	33.1558	10.7774	-30.5979	12.1710
	26	8	18	79.2391	7.1111	85068.1	7634.2	188.9303	7.1111	23.3603	9.3845	-33.1558	10.7774
	25	9	16	55.8789	6.1238	59989.4	6574.3	211.5081	6.1238	25.9492	7.9928	-23.3603	9.3845
	24	10	14	29.9297	5.1365	32131.4	5514.3	236.6748	5.1365	15.7381	6.6030	-25.9492	7.9928
	23	11	12	14.1916	4.1492	15235.6	4454.4	251.6304	4.1492	18.3270	5.2166	-15.7381	6.6030
	22	12	10	-4.1354	3.1619	-4439.6	3394.5	269.1749	3.1619	8.1159	3.8375	-18.3270	5.2166
	21	13	8	-12.2513	2.1746	-13152.5	2334.6	276.5084	2.1746	10.7048	2.4776	-8.1159	3.8375
	20	14	6	-22.9561	1.1873	-24644.8	1274.6	286.4307	1.1873	1.8817	1.2040	-10.7048	2.4776
	19	15	4	-24.8378	0.2000	-26664.9	214.7	287.5300	0.2000	5.0957	0.2000	-1.8817	1.2040
	18	16	2	-29.9334	0.0031	-32135.4	3.3	291.8432	0.0038	-5.4828	0.0064	-5.0957	0.2000
	17	17	0	-24.4507	0.0056	-26249.3	6.0	285.5780	0.0060	-6.0567	0.0161	5.4828	0.0064
	16	18	-2	-18.3940	0.0150	-19747.2	16.2	278.7389	0.0152	-17.9815	0.8154	6.0567	0.0161

A	N	Z	N-Z	MASSEN-EXCESS (MEV)		MASSEN-EXCESS (MICRO-EINH.)		BINDUNGS-ENERGIE (MEV)		NEGATONEN-ZERFALL ENERGIE(MEV)		ELEKTRONEN-EINFANG ENERGIE(MEV)	
	15	19	-4	-0.4126	0.8152	-442.9	875.2	259.9750	0.8152	-13.4733	1.9783	17.9815	0.8154
	14	20	-6	13.0607	1.8025	14021.5	1935.1	245.7192	1.8025	-21.7574	3.3215	13.4733	1.9783
	13	21	-8	34.8181	2.7898	37379.5	2995.0	223.1794	2.7898	-19.1685	4.6957	21.7574	3.3215
	12	22	-10	53.9866	3.7771	57958.0	4055.0	203.2284	3.7771	-29.3796	6.0800	19.1685	4.6957
	11	23	-12	83.3662	4.7644	89498.9	5114.9	173.0664	4.7644			29.3796	6.0800
35	30	5	25	205.2250	10.7217	220321.9	11510.4	73.3632	10.7217	42.5198	14.4901		
	29	6	23	162.7051	9.7472	174674.1	10464.3	115.1006	9.7472	38.6378	13.1138	-42.5198	14.4901
	28	7	21	124.0673	8.7728	133194.1	9418.2	152.9559	8.7728	31.5500	11.7378	-38.6378	13.1138
	27	8	19	92.5174	7.7984	99323.2	8372.0	183.7234	7.7984	28.1678	10.3625	-31.5500	11.7378
	26	9	17	64.3496	6.8239	69083.3	7325.9	211.1088	6.8239	24.3702	8.9879	-28.1678	10.3625
	25	10	15	39.9794	5.8495	42920.4	6279.8	234.6965	5.8495	20.5725	7.6147	-24.3702	8.9879
	24	11	13	19.4069	4.8751	20834.5	5233.7	254.4866	4.8751	16.7749	6.2435	-20.5725	7.6147
	23	12	11	2.6320	3.9006	2825.6	4187.6	270.4790	3.9006	12.9772	4.8762	-16.7749	6.2435
	22	13	9	-10.3452	2.9262	-11106.3	3141.5	282.6738	2.9262	9.1796	3.5174	-12.9772	4.8762
	21	14	7	-19.5248	1.9518	-20961.1	2095.3	291.0709	1.9518	6.3200	2.1828	-9.1796	3.5174
	20	15	5	-25.8448	0.9773	-27746.0	1049.2	296.6084	0.9773	3.0023	0.9773	-6.3200	2.1828
	19	16	3	-28.8471	0.0018	-30969.2	1.9	298.8283	0.0029	0.1674	0.0025	-3.0023	0.9773
	18	17	1	-29.0145	0.0018	-31148.8	2.0	298.2132	0.0029	-5.9638	0.0170	-0.1674	0.0025
	17	18	-1	-23.0507	0.0169	-24746.4	18.1	291.4670	0.0170	-11.7633	0.4641	5.9638	0.0170
	16	19	-3	-11.2875	0.4638	-12117.8	497.9	278.9213	0.4638	-14.9044	1.5112	11.7633	0.4641
	15	20	-5	3.6170	1.4383	3883.0	1544.1	263.2344	1.4383	-17.8801	2.8089	14.9044	1.5112
	14	21	-7	21.4970	2.4127	23078.4	2590.2	244.5719	2.4127	-20.5727	4.1586	17.8801	2.8089
	13	22	-9	42.0697	3.3871	45164.5	3636.3	223.2168	3.3871	-24.3703	5.5223	20.5727	4.1586
	12	23	-11	66.4401	4.3616	71327.6	4682.4	198.0640	4.3616			24.3703	5.5223
36	31	5	26	232.6699	10.6001	249785.7	11379.9	53.9897	10.6001	48.0716	14.3262		
	30	6	24	184.5983	9.6373	198177.8	10346.2	101.2789	9.6373	37.7851	12.9663	-48.0716	14.3262
	29	7	22	146.8132	8.6745	157613.2	9312.6	138.2815	8.6745	40.2186	11.6067	-37.7851	12.9663
	28	8	20	106.5947	7.7116	114436.0	8278.9	177.7176	7.7116	27.2005	10.2477	-40.2186	11.6067
	27	9	18	79.3942	6.7488	85234.6	7245.3	204.1356	6.7488	29.7145	8.8895	-27.2005	10.2477
	26	10	16	49.6797	5.7860	53334.3	6211.6	233.0676	5.7860	19.5084	7.5326	-29.7145	8.8895
	25	11	14	30.1713	4.8231	32390.8	5178.0	251.7936	4.8232	22.0223	6.1778	-19.5084	7.5326
	24	12	12	8.1490	3.8603	8748.4	4144.3	273.0335	3.8603	11.8163	4.8267	-22.0223	6.1778
	23	13	10	-3.6673	2.8975	-3937.1	3110.6	284.0673	2.8975	14.3302	3.4840	-11.8163	4.8267
	22	14	8	-17.9976	1.9347	-19321.5	2077.0	297.6151	1.9347	5.0622	2.1650	-14.3302	3.4840
	21	15	6	-23.0597	0.9718	-24756.1	1043.3	301.8948	0.9718	7.5946	0.9719	-5.0622	2.1650
	20	16	4	-30.6544	0.0087	-32909.4	9.3	308.7070	0.0090	-1.1349	0.0097	-7.5946	0.9719
	19	17	2	-29.5195	0.0043	-31691.0	4.6	306.7897	0.0049	0.7120	0.0050	1.1349	0.0097
	18	18	0	-30.2315	0.0026	-32455.4	2.8	306.7192	0.0035	-12.7641	0.3120	-0.7120	0.0050
	17	19	-2	-17.4674	0.3120	-18752.4	334.9	293.1727	0.3120	-10.9173	0.6969	12.7641	0.3120
	16	20	-4	-6.5502	0.6231	-7032.0	669.0	281.4730	0.6231	-19.4767	1.7040	10.9173	0.6969

A	N	Z	N-Z	MASSEN-EXCESS (MEV)		MASSEN-EXCESS (MICRO-EINH.)		BINDUNGS-ENERGIE (MEV)		NEGATONEN-ZERFALL ENERGIE(MEV)		ELEKTRONEN-EINFANG ENERGIE(MEV)	
	15	21	-6	12.9266	1.5860	13877.5	1702.6	261.2138	1.5860	-16.9443	3.0019	19.4767	1.7040
	14	22	-8	29.8708	2.5488	32068.2	2736.3	243.4871	2.5488	-26.0638	4.3391	16.9443	3.0019
	13	23	-10	55.9347	3.5116	60049.4	3770.0	216.6408	3.5116	-23.5499	5.6879	26.0638	4.3391
	12	24	-12	79.4846	4.4745	85331.7	4803.6	192.3085	4.4745			23.5499	5.6879
37	31	6	25	213.9623	9.5937	229701.9	10299.4	79.9863	9.5937	43.5777	12.9117		
	30	7	23	170.3846	8.6413	182918.5	9277.0	122.7816	8.6413	39.5876	11.5669	-43.5777	12.9117
	29	8	21	130.7970	7.6890	140418.8	8254.6	161.5867	7.6890	35.5975	10.2226	-39.5876	11.5669
	28	9	19	95.1995	6.7366	102202.7	7232.1	196.4017	6.7366	28.9277	8.8791	-35.5975	10.2226
	27	10	17	66.2718	5.7842	71147.0	6209.7	224.5470	5.7842	25.0142	7.5368	-28.9277	8.8791
	26	11	15	41.2576	4.8318	44292.6	5187.3	248.7787	4.8318	21.1008	6.1965	-25.0142	7.5368
	25	12	13	20.1569	3.8795	21639.7	4164.9	269.0970	3.8795	17.1873	4.8599	-21.1008	6.1965
	24	13	11	2.9696	2.9271	3188.0	3142.4	285.5019	2.9271	13.2738	3.5309	-17.1873	4.8599
	23	14	9	-10.3042	1.9747	-11062.2	2120.0	297.9932	1.9747	10.2983	2.2237	-13.2738	3.5309
	22	15	7	-20.6026	1.0224	-22118.1	1097.6	307.5091	1.0224	6.4034	1.0248	-10.2983	2.2237
	21	16	5	-27.0059	0.0700	-28992.5	75.1	313.1300	0.0700	4.7588	0.0700	-6.4034	1.0248
	20	17	3	-31.7647	0.0018	-34101.4	1.9	317.1063	0.0030	-0.8138	0.0027	-4.7588	0.0700
	19	18	1	-30.9509	0.0020	-33227.8	2.1	315.5101	0.0031	-6.1514	0.0037	0.8138	0.0027
	18	19	-1	-24.7996	0.0031	-26623.9	3.3	308.5763	0.0039	-11.5596	0.0501	6.1514	0.0037
	17	20	-3	-13.2400	0.0500	-14214.0	53.7	296.2343	0.0501	-19.3269	0.8389	11.5596	0.0501
	16	21	-5	6.0868	0.8374	6534.6	899.0	276.1250	0.8374	-18.6075	1.9759	19.3269	0.8389
	15	22	-7	24.6943	1.7897	26510.9	1921.4	256.7351	1.7897	-22.5024	3.2745	18.6075	1.9759
	14	23	-9	47.1967	2.7421	50668.6	2943.8	233.4502	2.7421	-25.3479	4.6009	22.5024	3.2745
	13	24	-11	72.5446	3.6945	77881.2	3966.3	207.3199	3.6945			25.3479	4.6009
38	32	6	26	237.0938	9.5794	254535.0	10284.1	64.9263	9.5794	42.4521	12.8979		
	31	7	24	194.6417	8.6365	208960.1	9271.8	106.5959	8.6365	44.9986	11.5663	-42.4521	12.8979
	30	8	22	149.6431	7.6935	160651.2	8259.5	150.8120	7.6936	34.4252	10.2353	-44.9986	11.5663
	29	9	20	115.2179	6.7506	123693.7	7247.2	184.4547	6.7506	36.9717	8.9050	-34.4252	10.2353
	28	10	18	78.2462	5.8077	84002.2	6234.9	220.6440	5.8077	23.7640	7.5759	-36.9717	8.9050
	27	11	16	54.4823	4.8647	58490.1	5222.6	243.6255	4.8647	26.3835	6.2487	-23.7640	7.5759
	26	12	14	28.0988	3.9218	30165.8	4210.3	269.2265	3.9218	15.8830	4.9248	-26.3835	6.2487
	25	13	12	12.2159	2.9788	13114.5	3198.0	284.3270	2.9788	18.5025	3.6081	-15.8830	4.9248
	24	14	10	-6.2866	2.0359	-6749.0	2185.7	302.0470	2.0359	8.9400	2.3107	-18.5025	3.6081
	23	15	8	-15.2265	1.0929	-16346.6	1173.3	310.2045	1.0929	11.5780	1.1032	-8.9400	2.3107
	22	16	6	-26.8045	0.1500	-28776.3	161.0	321.0000	0.1500	2.9985	0.1502	-11.5780	1.1032
	21	17	4	-29.8029	0.0086	-31995.3	9.3	323.2160	0.0090	4.9153	0.0091	-2.9985	0.1502
	20	18	2	-34.7182	0.0028	-37272.1	3.0	327.3488	0.0037	-5.9324	0.0101	-4.9153	0.0091
	19	19	0	-28.7858	0.0097	-30903.4	10.4	320.6340	0.0100	-6.7359	0.0268	5.9324	0.0101
	18	20	-2	-22.0500	0.0250	-23672.0	26.8	313.1157	0.0251	-19.3823	0.6233	6.7359	0.0268
	17	21	-4	-2.6677	0.6228	-2864.0	668.7	292.9510	0.6228	-16.5661	1.2387	19.3823	0.6233
	16	22	-6	13.8983	1.0708	14920.7	1149.5	275.6025	1.0708	-24.1041	2.2807	16.5661	1.2387

A	N	Z	N-Z	MASSEN-EXCESS (MEV)		MASSEN-EXCESS (MICRO-EINH.)		BINDUNGS-ENERGIE (MEV)		NEGATONEN-ZERFALL ENERGIE(MEV)		ELEKTRONEN-EINFANG ENERGIE(MEV)	
	15	23	-8	38.0024	2.0137	40797.9	2161.8	250.7160	2.0137	-21.4661	3.5773	24.1041	2.2807
	14	24	-10	59.4684	2.9567	63843.1	3174.2	228.4675	2.9567	-30.9171	4.8937	21.4661	3.5773
	13	25	-12	90.3855	3.8996	97034.5	4186.5	196.7680	3.8996			30.9171	4.8937
39	33	6	27	258.9935	10.2980	278045.8	11055.6	51.0979	10.2980	47.2019	13.9185		
	32	7	25	211.7917	9.3636	227371.6	10052.4	97.5173	9.3636	43.2176	12.5987	-47.2019	13.9185
	31	8	23	168.5741	8.4291	180974.8	9049.2	139.9525	8.4291	39.2334	11.2792	-43.2176	12.5987
	30	9	21	129.3407	7.4947	138855.3	8046.0	178.4034	7.4947	35.2491	9.9602	-39.2334	11.2792
	29	10	19	94.0916	6.5602	101013.2	7042.8	212.8701	6.5602	31.2649	8.6421	-35.2491	9.9602
	28	11	17	62.8267	5.6257	67448.4	6039.6	243.3525	5.6257	24.6855	7.3251	-31.2649	8.6421
	27	12	15	38.1412	4.6913	40946.9	5036.4	267.2556	4.6913	20.7707	6.0102	-24.6855	7.3251
	26	13	13	17.3705	3.7568	18648.3	4033.2	287.2438	3.7568	16.8558	4.6989	-20.7707	6.0102
	25	14	11	0.5147	2.8224	552.6	3030.0	303.3171	2.8224	13.8789	3.3956	-16.8558	4.6989
	24	15	9	-13.3642	1.8879	-14347.3	2026.8	316.4136	1.8879	9.9826	2.1150	-13.8789	3.3956
	23	16	7	-23.3468	0.9535	-25064.2	1023.6	325.6137	0.9535	6.4527	0.9536	-9.9826	2.1150
	22	17	5	-29.7995	0.0188	-31991.6	20.2	331.2840	0.0190	3.4385	0.0196	-6.4527	0.9536
	21	18	3	-33.2379	0.0054	-35683.0	5.8	333.9400	0.0060	0.5653	0.0061	-3.4385	0.0196
	20	19	1	-33.8032	0.0029	-36289.8	3.1	333.7228	0.0038	-6.5034	0.0230	-0.5653	0.0061
	19	20	-1	-27.2998	0.0229	-29308.1	24.5	326.4370	0.0230	-14.7491	0.4670	6.5034	0.0230
	18	21	-3	-12.5508	0.4665	-13474.1	500.8	310.9055	0.4665	-17.4966	0.9144	14.7491	0.4670
	17	22	-5	4.9458	0.7864	5309.6	844.3	292.6265	0.7864	-19.1488	1.8921	17.4966	0.9144
	16	23	-7	24.0946	1.7209	25867.0	1847.5	272.6952	1.7209	-22.8307	3.1642	19.1488	1.8921
	15	24	-9	46.9252	2.6554	50377.2	2850.7	249.0821	2.6554	-26.7270	4.4652	22.8307	3.1642
	14	25	-11	73.6523	3.5898	79070.3	3853.9	221.5726	3.5898			26.7270	4.4652
40	33	7	26	228.7472	9.7682	245574.5	10486.8	88.6332	9.7682	47.5420	13.1753		
	32	8	24	181.2053	8.8414	194535.2	9491.8	135.3927	8.8414	36.7906	11.8664	-47.5420	13.1753
	31	9	22	144.4147	7.9146	155038.2	8496.8	171.4008	7.9146	39.7191	10.5579	-36.7906	11.8664
	30	10	20	104.6956	6.9878	112397.3	7501.8	210.3375	6.9878	28.9677	9.2501	-39.7191	10.5579
	29	11	18	75.7279	6.0609	81298.7	6506.8	238.5227	6.0609	31.8962	7.9432	-28.9677	9.2501
	28	12	16	43.8317	5.1341	47056.1	5511.8	269.6365	5.1341	18.5830	6.6378	-31.8962	7.9432
	27	13	14	25.2488	4.2073	27106.1	4516.8	287.4370	4.2073	21.5775	5.3350	-18.5830	6.6378
	26	14	12	3.6713	3.2805	3941.4	3521.8	308.2320	3.2805	11.8300	4.0375	-21.5775	5.3350
	25	15	10	-8.1587	2.3536	-8758.8	2526.8	319.2795	2.3536	14.8430	2.7524	-11.8300	4.0375
	24	16	8	-23.0016	1.4268	-24693.7	1531.8	333.3400	1.4268	4.5425	1.5119	-14.8430	2.7524
	23	17	6	-27.5441	0.5000	-29570.3	536.8	337.1000	0.5000	7.4942	0.5000	-4.5425	1.5119
	22	18	4	-35.0382	0.0006	-37615.7	0.7	343.8117	0.0027	-1.5050	0.0014	-7.4942	0.5000
	21	19	2	-33.5333	0.0013	-36000.0	1.4	341.5243	0.0029	1.3144	0.0037	1.5050	0.0014
	20	20	0	-34.8476	0.0035	-37411.1	3.7	342.0562	0.0043	-14.3246	0.0078	-1.3144	0.0037
	19	21	-2	-20.5231	0.0070	-22032.8	7.5	326.9492	0.0074	-13.7821	0.6170	14.3246	0.0078
	18	22	-4	-6.7410	0.6169	-7236.9	662.3	312.3847	0.6169	-21.6428	1.5495	13.7821	0.6170
	17	23	-6	14.9018	1.4214	15998.0	1525.9	289.9595	1.4214	-17.5291	2.7449	21.6428	1.5495

A	N	Z	N-Z	MASSEN-EXCESS (MEV)		MASSEN-EXCESS (MICRO-EINH.)		BINDUNGS-ENERGIE (MEV)		NEGATONEN-ZERFALL ENERGIE (MEV)		ELEKTRONEN-EINFANG ENERGIE (MEV)	
	16	24	-8	32.4308	2.3482	34816.5	2520.9	271.6480	2.3482	-28.0131	4.0298	17.5291	2.7449
	15	25	-10	60.4439	3.2750	64890.3	3515.9	242.8525	3.2750	-25.0001	5.3274	28.0131	4.0298
	14	26	-12	85.4439	4.2018	91729.4	4510.9	217.0700	4.2018			25.0001	5.3274
41	34	7	27	235.9237	10.1256	253278.9	10870.4	89.5282	10.1256	43.9484	13.6847		
	33	8	25	191.9753	9.2056	206097.5	9882.8	132.6941	9.2056	40.1843	12.3853	-43.9484	13.6847
	32	9	23	151.7910	8.2857	162957.1	8895.2	172.0960	8.2857	36.4202	11.0863	-40.1843	12.3853
	31	10	21	115.3708	7.3657	123857.7	7907.5	207.7338	7.3657	32.6562	9.7878	-36.4202	11.0863
	30	11	19	82.7146	6.4457	88799.3	6919.9	239.6075	6.4457	28.8921	8.4901	-32.6562	9.7878
	29	12	17	53.8225	5.5258	57781.9	5932.3	267.7171	5.5258	25.1280	7.1936	-28.8921	8.4901
	28	13	15	28.6945	4.6058	30805.4	4944.6	292.0627	4.6058	18.8298	5.8991	-25.1280	7.1936
	27	14	13	9.8648	3.6858	10590.4	3957.0	310.1100	3.6858	16.0663	4.6082	-18.8298	5.8991
	26	15	11	-6.2015	2.7659	-6657.7	2969.3	325.3938	2.7659	12.3833	3.3253	-16.0663	4.6082
	25	16	9	-18.5849	1.8459	-19952.0	1981.7	336.9947	1.8459	9.0668	2.0651	-12.3833	3.3253
	24	17	7	-27.6517	0.9260	-29685.8	994.1	345.2791	0.9260	5.4154	0.9260	-9.0668	2.0651
	23	18	5	-33.0671	0.0054	-35499.6	5.7	349.9120	0.0060	2.4853	0.0065	-5.4154	0.9260
	22	19	3	-35.5523	0.0036	-38167.6	3.9	351.6148	0.0045	-0.4274	0.0054	-2.4853	0.0065
	21	20	1	-35.1250	0.0040	-37708.8	4.3	350.4050	0.0048	-6.4950	0.0117	0.4274	0.0054
	20	21	-1	-28.6300	0.0110	-30736.1	11.8	343.1276	0.0113	-12.8001	0.1006	6.4950	0.0117
	19	22	-3	-15.8300	0.1000	-16994.5	107.3	329.5451	0.1000	-18.7607	0.7808	12.8001	0.1006
	18	23	-5	2.9307	0.7744	3146.3	831.3	310.0020	0.7744	-18.6925	1.8629	18.7607	0.7808
	17	24	-7	21.6232	1.6943	23213.8	1819.0	290.5271	1.6943	-22.3439	3.1153	18.6925	1.8629
	16	25	-9	43.9671	2.6143	47201.4	2806.6	267.4007	2.6143	-25.8754	4.3961	22.3439	3.1153
	15	26	-11	69.8425	3.5342	74980.3	3794.2	240.7428	3.5342			25.8754	4.3961
42	35	7	28	241.4587	10.0918	259221.0	10834.2	92.0647	10.0918	46.6262	13.6412		
	34	8	26	194.8325	9.1780	209164.9	9853.2	137.9084	9.1780	36.0454	12.3505	-46.6262	13.6412
	33	9	24	158.7871	8.2642	170467.9	8872.2	173.1714	8.2642	39.4646	11.0601	-36.0454	12.3505
	32	10	22	119.3225	7.3504	128100.2	7891.1	211.8535	7.3504	28.8837	9.7703	-39.4646	11.0601
	31	11	20	90.4388	6.4366	97091.7	6910.1	239.9547	6.4366	32.3029	8.4813	-28.8837	9.7703
	30	12	18	58.1359	5.5228	62412.6	5929.1	271.4752	5.5228	21.7221	7.1934	-32.3029	8.4813
	29	13	16	36.4139	4.6090	39092.6	4948.1	292.4148	4.6090	25.1412	5.9074	-21.7221	7.1934
	28	14	14	11.2727	3.6952	12101.9	3967.0	316.7735	3.6952	12.9866	4.6250	-25.1412	5.9074
	27	15	12	-1.7140	2.7814	-1840.1	2986.0	328.9777	2.7814	16.4837	3.3503	-12.9866	4.6250
	26	16	10	-18.1976	1.8676	-19536.3	2005.0	344.6789	1.8676	6.3472	2.0971	-16.4837	3.3503
	25	17	8	-24.5449	0.9538	-26350.4	1024.0	350.2437	0.9538	9.8758	0.9546	-6.3472	2.0971
	24	18	6	-34.4206	0.0399	-36952.7	42.8	359.3370	0.0400	0.5954	0.0417	-9.8758	0.9546
	23	19	4	-35.0160	0.0120	-37591.8	12.9	359.1499	0.0123	3.5237	0.0125	-0.5954	0.0417
	22	20	2	-38.5396	0.0037	-41374.7	4.0	361.8911	0.0046	-6.4307	0.0054	-3.5237	0.0125
	21	21	0	-32.1090	0.0040	-34471.0	4.3	354.6780	0.0048	-6.9860	0.0081	6.4307	0.0054
	20	22	-2	-25.1230	0.0070	-26971.1	7.5	346.9096	0.0075	-19.5663	0.6276	6.9860	0.0081
	19	23	-4	-5.5568	0.6276	-5965.5	673.7	326.5609	0.6276	-15.3250	1.1494	19.5663	0.6276



A	N	Z	N-Z	MASSEN-EXCESS (MEV)		MASSEN-EXCESS (MICRO-EINH.)		BINDUNGS-ENERGIE (MEV)		NEGATONEN-ZERFALL ENERGIE (MEV)		ELEKTRONEN-EINFANG ENERGIE (MEV)	
	18	24	-6	9.7682	0.9629	10486.8	1033.8	310.4535	0.9629	-23.4434	2.1093	15.3250	1.1494
	17	25	-8	33.2115	1.8767	35654.7	2014.8	286.2277	1.8767	-19.9148	3.3629	23.4434	2.1093
	16	26	-10	53.1264	2.7905	57034.5	2995.8	265.5304	2.7905	-30.2978	4.6378	19.9148	3.3629
	15	27	-12	83.4241	3.7043	89561.0	3976.8	234.4502	3.7043			30.2978	4.6378
43	35	8	27	200.5453	10.0021	215297.9	10737.9	140.2671	10.0021	39.0900	13.5182		
	34	9	25	161.4553	9.0939	173332.3	9762.8	178.5746	9.0939	35.6653	12.2353	-39.0900	13.5182
	33	10	23	125.7900	8.1856	135043.4	8787.7	213.4575	8.1856	32.2407	10.9527	-35.6653	12.2353
	32	11	21	93.5493	7.2773	100431.0	7812.6	244.9157	7.2773	28.8160	9.6707	-32.2407	10.9527
	31	12	19	64.7333	6.3690	69495.3	6837.5	272.9492	6.3690	25.3913	8.3895	-28.8160	9.6707
	30	13	17	39.3420	5.4607	42236.1	5862.4	297.5581	5.4607	21.9667	7.1094	-25.3913	8.3895
	29	14	15	17.3753	4.5524	18653.5	4887.3	318.7423	4.5524	18.5420	5.8313	-21.9667	7.1094
	28	15	13	-1.1667	3.6441	-1252.5	3912.2	336.5018	3.6441	13.5794	4.5568	-18.5420	5.8313
	27	16	11	-14.7460	2.7359	-15830.8	2937.1	349.2987	2.7359	10.5959	3.2901	-13.5794	4.5568
	26	17	9	-25.3420	1.8276	-27206.2	1962.0	359.1122	1.8276	7.2775	2.0457	-10.5959	3.2901
	25	18	7	-32.6195	0.9193	-35019.1	986.9	365.6073	0.9193	3.9591	0.9193	-7.2775	2.0457
	24	19	5	-36.5786	0.0106	-39269.5	11.4	368.7840	0.0110	1.8173	0.0113	-3.9591	0.9193
	23	20	3	-38.3959	0.0039	-41220.4	4.2	369.8188	0.0048	-2.2214	0.0094	-1.8173	0.0113
	22	21	1	-36.1745	0.0086	-38835.6	9.2	366.8150	0.0090	-6.8326	0.1502	-2.2214	0.0094
	21	22	-1	-29.3420	0.1500	-31500.5	161.0	359.2000	0.1500	-11.2748	0.4903	6.8326	0.1502
	20	23	-3	-18.0672	0.4668	-19396.3	501.2	347.1428	0.4668	-19.1389	0.9099	11.2748	0.4903
	19	24	-5	1.0716	0.7811	1150.5	838.5	327.2215	0.7811	-17.8172	1.8612	19.1389	0.9099
	18	25	-7	18.8889	1.6893	20278.4	1813.6	308.6218	1.6893	-21.1356	3.0986	17.8172	1.8612
	17	26	-9	40.0245	2.5976	42968.8	2788.7	286.7037	2.5976	-24.4540	4.3634	21.1356	3.0986
	16	27	-11	64.4785	3.5059	69221.7	3763.8	261.4672	3.5059			24.4540	4.3634
44	36	8	28	203.2242	10.1369	218173.9	10882.6	145.6595	10.1369	35.3729	13.7118		
	35	9	26	167.8514	9.2335	180199.0	9912.8	180.2499	9.2335	38.9991	12.4358	-35.3729	13.7118
	34	10	24	128.8523	8.3302	138331.0	8943.0	218.4666	8.3302	28.7854	11.1602	-38.9991	12.4358
	33	11	22	100.0669	7.4268	107428.1	7973.1	246.4695	7.4268	32.4117	9.8850	-28.7854	11.1602
	32	12	20	67.6552	6.5235	72632.1	7003.3	278.0988	6.5235	22.1979	8.6105	-32.4117	9.8850
	31	13	18	45.4573	5.6201	48801.2	6033.5	299.5142	5.6201	25.8242	7.3371	-22.1979	8.6105
	30	14	16	19.6331	4.7168	21077.3	5063.7	324.5560	4.7168	15.6105	6.0655	-25.8242	7.3371
	29	15	14	4.0226	3.8134	4318.5	4093.9	339.3840	3.8134	19.2368	4.7969	-15.6105	6.0655
	28	16	12	-15.2141	2.9101	-16333.3	3124.1	357.8383	2.9101	7.8825	3.5349	-19.2368	4.7969
	27	17	10	-23.0966	2.0067	-24795.6	2154.3	364.9383	2.0067	11.6120	2.2900	-7.8825	3.5349
	26	18	8	-34.7085	1.1033	-37261.8	1184.5	375.7678	1.1034	1.5015	1.1213	-11.6120	2.2900
	25	19	6	-36.2100	0.2000	-38873.7	214.7	376.4868	0.2000	5.2497	0.2000	-1.5015	1.1213
	24	20	4	-41.4596	0.0041	-44509.5	4.4	380.9540	0.0050	-3.6466	0.0067	-5.2497	0.2000
	23	21	2	-37.8131	0.0053	-40594.7	5.7	376.5250	0.0060	-0.1556	0.0137	3.6466	0.0067
	22	22	0	-37.6575	0.0127	-40427.7	13.6	375.5870	0.0130	-13.7656	0.3147	0.1556	0.0137
	21	23	-2	-23.8920	0.3145	-25649.5	337.6	361.0390	0.3145	-10.2746	0.6969	13.7656	0.3147

A	N	Z	N-Z	MASSEN-EXCESS (MEV)		MASSEN-EXCESS (MICRO-EINH.)		BINDUNGS-ENERGIE (MEV)		NEGATONEN-ZERFALL ENERGIE (MEV)		ELEKTRONEN-EINFANG ENERGIE (MEV)	
	20	24	-4	-13.6174	0.6220	-14619.2	667.7	349.9820	0.6220	-23.3393	1.2859	10.2746	0.6969
	19	25	-6	9.7218	1.1255	10437.0	1208.2	325.8603	1.1255	-15.6501	2.3201	23.3393	1.2859
	18	26	-8	25.3719	2.0288	27238.3	2178.0	309.4278	2.0288	-25.7606	3.5656	15.6501	2.3201
	17	27	-10	51.1324	2.9322	54893.8	3147.9	282.8848	2.9322	-22.0311	4.8279	25.7606	3.5656
	16	28	-12	73.1635	3.8355	78545.6	4117.7	260.0713	3.8355			22.0311	4.8279
45	37	8	29	212.2512	10.0884	-227865.0	10830.6	144.7040	10.0884	38.7230	13.6464		
	36	9	27	173.5282	9.1895	186293.4	9865.5	182.6445	9.1895	35.5411	12.3766	-38.7230	13.6464
	35	10	25	137.9871	8.2905	148137.8	8900.4	217.4032	8.2905	32.3592	11.1072	-35.5411	12.3766
	34	11	23	105.6280	7.3916	113398.2	7935.3	248.9799	7.3916	29.1773	9.8382	-32.3592	11.1072
	33	12	21	76.4507	6.4926	82074.6	6970.3	277.3747	6.4926	25.9954	8.5699	-29.1773	9.8382
	32	13	19	50.4553	5.5937	54166.9	6005.2	302.5877	5.5937	22.8135	7.3027	-25.9954	8.5699
	31	14	17	27.6418	4.6947	29675.2	5040.1	324.6187	4.6947	19.6316	6.0373	-22.8135	7.3027
	30	15	15	8.0102	3.7958	8599.5	4075.0	343.4678	3.7958	16.4497	4.7749	-19.6316	6.0373
	29	16	13	-8.4395	2.8968	-9060.3	3109.9	359.1351	2.8968	13.2678	3.5190	-16.4497	4.7749
	28	17	11	-21.7072	1.9979	-23304.1	2144.9	371.6204	1.9979	9.0031	2.2802	-13.2678	3.5190
	27	18	9	-30.7103	1.0989	-32969.4	1179.8	379.8410	1.0989	5.9215	1.1170	-9.0031	2.2802
	26	19	7	-36.6318	0.2000	-39326.5	214.7	384.9800	0.2000	4.1767	0.2000	-5.9215	1.1170
	25	20	5	-40.8084	0.0036	-43810.4	3.9	388.3742	0.0047	0.2522	0.0049	-4.1767	0.2000
	24	21	3	-41.0606	0.0033	-44081.1	3.5	387.8439	0.0044	-2.0585	0.0062	-0.2522	0.0049
	23	22	1	-39.0021	0.0053	-41871.2	5.6	385.0030	0.0060	-7.0116	0.1606	2.0585	0.0062
	22	23	-1	-31.9906	0.1605	-34343.9	172.3	377.2090	0.1605	-12.3647	0.4947	7.0116	0.1606
	21	24	-3	-19.6259	0.4679	-21069.6	502.4	364.0619	0.4679	-14.2753	0.9072	12.3647	0.4947
	20	25	-5	-5.3507	0.7773	-5744.3	834.4	349.0042	0.7773	-23.4228	1.4989	14.2753	0.9072
	19	26	-7	18.0721	1.2816	19401.5	1375.9	324.7990	1.2816	-20.3606	2.5293	23.4228	1.4989
	18	27	-9	38.4327	2.1805	41259.9	2340.9	303.6560	2.1805	-23.4422	3.7733	20.3606	2.5293
	17	28	-11	61.8748	3.0795	66426.5	3306.0	279.4314	3.0795			23.4422	3.7733
46	37	9	28	182.6565	8.9686	196093.2	9628.4	181.5877	8.9686	39.2050	12.0673		
	36	10	26	143.4515	8.0736	154004.2	8667.5	220.0102	8.0736	29.4240	10.8035	-39.2050	12.0673
	35	11	24	114.0275	7.1786	122415.6	7706.6	248.6518	7.1786	33.0031	9.5402	-29.4240	10.8035
	34	12	22	81.0244	6.2835	86984.8	6745.8	280.8724	6.2835	23.2221	8.2776	-33.0031	9.5402
	33	13	20	57.8023	5.3885	62054.4	5784.9	303.3121	5.3885	26.8011	7.0162	-23.2221	8.2776
	32	14	18	31.0012	4.4935	33281.8	4824.0	329.3307	4.4935	17.0201	5.7567	-26.8011	7.0162
	31	15	16	13.9811	3.5984	15009.6	3863.1	345.5684	3.5984	20.5991	4.5008	-17.0201	5.7567
	30	16	14	-6.6180	2.7034	-7104.9	2902.3	365.3851	2.7034	10.8182	3.2525	-20.5991	4.5008
	29	17	12	-17.4362	1.8084	-18718.8	1941.4	375.4208	1.8084	14.3972	2.0259	-10.8182	3.2525
	28	18	10	-31.8333	0.9133	-34175.1	980.5	389.0355	0.9133	3.5867	0.9135	-14.3972	2.0259
	27	19	8	-35.4200	0.0180	-38025.6	19.4	391.8397	0.0183	7.7178	0.0204	-3.5867	0.9135
	26	20	6	-43.1378	0.0095	-46311.1	10.2	398.7750	0.0100	-1.3821	0.0103	-7.7178	0.0204
	25	21	4	-41.7557	0.0039	-44827.4	4.1	396.6105	0.0049	2.3669	0.0046	1.3821	0.0103
	24	22	2	-44.1226	0.0025	-47368.3	2.7	398.1949	0.0039	-7.0536	0.0039	-2.3669	0.0046

A	N	Z	N-Z	MASSEN-EXCESS (MEV)		MASSEN-EXCESS (MICRO-EINH.)		BINDUNGS-ENERGIE (MEV)		NEGATONEN-ZERFALL ENERGIE (MEV)		ELEKTRONEN-EINFANG ENERGIE (MEV)	
	23	23	0	-37.0690	0.0030	-39795.9	3.2	390.3589	0.0042	-7.4716	0.3136	7.0536	0.0039
	22	24	-2	-29.5975	0.3135	-31774.7	336.6	382.1049	0.3136	-16.8920	0.6985	7.4716	0.3136
	21	25	-4	-12.7055	0.6242	-13640.2	670.1	364.4305	0.6242	-13.1431	1.1275	16.8920	0.6985
	20	26	-6	0.4375	0.9390	469.7	1008.0	350.5050	0.9390	-27.7089	1.5689	13.1431	1.1275
	19	27	-8	28.1464	1.2569	30216.9	1349.4	322.0137	1.2569	-18.3163	2.4921	27.7089	1.5689
	18	28	-10	46.4627	2.1520	49880.6	2310.3	302.9150	2.1520	-29.1067	3.7303	18.3163	2.4921
	17	29	-12	75.5693	3.0470	81128.4	3271.1	273.0259	3.0470			29.1067	3.7303
47	38	9	29	191.5237	8.9369	205612.7	9594.3	180.7919	8.9369	36.4053	12.0247		
	37	10	27	155.1185	8.0453	166529.4	8637.1	216.4147	8.0453	33.3648	10.7658	-36.4053	12.0247
	36	11	25	121.7537	7.1537	130710.2	7680.0	248.9970	7.1537	30.3243	9.5074	-33.3648	10.7658
	35	12	23	91.4294	6.2622	98155.2	6722.8	278.5389	6.2622	27.2838	8.2497	-30.3243	9.5074
	34	13	21	64.1456	5.3706	68864.4	5765.7	305.0402	5.3706	24.2433	6.9932	-27.2838	8.2497
	33	14	19	39.9023	4.4790	42837.6	4808.5	328.5011	4.4790	21.2028	5.7386	-24.2433	6.9932
	32	15	17	18.6995	3.5875	20075.1	3851.4	348.9215	3.5875	18.1623	4.4875	-21.2028	5.7386
	31	16	15	0.5371	2.6959	576.7	2894.2	366.3013	2.6959	15.1219	3.2440	-18.1623	4.4875
	30	17	13	-14.5847	1.8043	-15657.6	1937.1	380.6408	1.8043	12.0814	2.0221	-15.1219	3.2440
	29	18	11	-26.6661	0.9128	-28627.7	979.9	391.9397	0.9128	9.0409	0.9130	-12.0814	2.0221
	28	19	9	-35.7070	0.0210	-38333.7	22.5	400.1981	0.0212	6.6404	0.0219	-9.0409	0.9130
	27	20	7	-42.3473	0.0063	-45462.5	6.7	406.0560	0.0070	1.9790	0.0071	-6.6404	0.0219
	26	21	5	-44.3263	0.0034	-47587.0	3.7	407.2525	0.0046	0.6003	0.0045	-1.9790	0.0071
	25	22	3	-44.9265	0.0029	-48231.4	3.1	407.0703	0.0042	-2.9159	0.0090	-0.6003	0.0045
	24	23	1	-42.0107	0.0085	-45101.1	9.1	403.3720	0.0090	-7.5136	0.1644	2.9159	0.0090
	23	24	-1	-34.4971	0.1642	-37034.8	176.2	395.0760	0.1642	-11.7113	0.4976	7.5136	0.1644
	22	25	-3	-22.7859	0.4697	-24462.1	504.3	382.5823	0.4698	-15.6274	0.9110	11.7113	0.4976
	21	26	-5	-7.1585	0.7805	-7685.1	837.9	366.1725	0.7805	-16.6061	1.3433	15.6274	0.9110
	20	27	-7	9.4475	1.0933	10142.5	1173.7	348.7840	1.0933	-27.7650	1.7904	16.6061	1.3433
	19	28	-9	37.2125	1.4179	39949.9	1522.2	320.2366	1.4179	-24.0193	2.7099	27.7650	1.7904
	18	29	-11	61.2318	2.3094	65736.2	2479.3	295.4348	2.3094			24.0193	2.7099
48	39	9	30	201.9607	9.7836	216817.4	10503.3	178.4264	9.7836	40.1883	13.2227		
	38	10	28	161.7724	8.8951	173672.8	9549.4	217.8322	8.8951	30.9175	11.9678	-40.1883	13.2227
	37	11	26	130.8549	8.0066	140481.0	8595.6	247.9672	8.0066	34.2067	10.7132	-30.9175	11.9678
	36	12	24	96.6483	7.1181	103758.0	7641.7	281.3914	7.1181	24.9358	9.4591	-34.2067	10.7132
	35	13	22	71.7124	6.2296	76987.8	6687.8	305.5448	6.2296	28.2250	8.2057	-24.9358	9.4591
	34	14	20	43.4874	5.3410	46686.4	5733.9	332.9874	5.3410	18.9542	6.9536	-28.2250	8.2057
	33	15	18	24.5332	4.4525	26337.9	4780.1	351.1592	4.4525	22.2434	5.7033	-18.9542	6.9536
	32	16	16	2.2898	3.5640	2458.2	3826.2	372.6202	3.5640	12.9726	4.4565	-22.2434	5.7033
	31	17	14	-10.6829	2.6755	-11468.7	2872.3	384.8103	2.6755	16.2618	3.2174	-12.9726	4.4565
	30	18	12	-26.9447	1.7870	-28926.8	1918.5	400.2897	1.7870	6.9910	2.0002	-16.2618	3.2174
	29	19	10	-33.9357	0.8985	-36432.1	964.6	406.4983	0.8985	10.2802	0.8986	-6.9910	2.0002
	28	20	8	-44.2159	0.0095	-47468.5	10.2	415.9960	0.0100	0.2895	0.0120	-10.2802	0.8986

A	N	Z	N-Z	MASSEN-EXCESS (MEV)	MASSEN-EXCESS (MICRO-EINH.)	MASSEN-EXCESS (MICRO-EINH.)	BINDUNGS-ENERGIE (MEV)	BINDUNGS-ENERGIE (MEV)	NEGATONEN-ZERFALL ENERGIE (MEV)	NEGATONEN-ZERFALL ENERGIE (MEV)	ELEKTRONEN-EINFANG ENERGIE (MEV)	ELEKTRONEN-EINFANG ENERGIE (MEV)	
	27	21	6	-44.5053	0.0073	-47779.3	7.9	415.5030	0.0080	3.9778	0.0077	-0.2895	0.0120
	26	22	4	-48.4831	0.0023	-52049.6	2.5	418.6983	0.0039	-4.0132	0.0043	-3.9778	0.0077
	25	23	2	-44.4699	0.0037	-47741.3	3.9	413.9027	0.0048	-1.6420	0.0311	4.0132	0.0043
	24	24	0	-42.8280	0.0308	-45978.5	33.1	411.4783	0.0310	-13.4872	0.3175	1.6420	0.0311
	23	25	-2	-29.3408	0.3160	-31499.2	339.2	397.2087	0.3160	-11.1160	0.7014	13.4872	0.3175
	22	26	-4	-18.2249	0.6262	-19565.6	672.3	385.3103	0.6263	-19.1069	1.1308	11.1160	0.7014
	21	27	-6	0.8820	0.9415	946.9	1010.8	365.4210	0.9415	-15.4186	1.5687	19.1069	1.1308
	20	28	-8	16.3005	1.2547	17499.6	1347.0	349.2200	1.2547	-25.5254	2.4835	15.4186	1.5687
	19	29	-10	41.8259	2.1432	44902.8	2300.9	322.9121	2.1432	-22.2362	3.7128	25.5254	2.4835
	18	30	-12	64.0621	3.0317	68774.7	3254.7	299.8935	3.0317			22.2362	3.7128
49	39	10	29	176.0236	8.8703	188972.4	9522.8	211.6525	8.8703	35.0854	11.9345		
	38	11	27	140.9382	7.9845	151306.0	8571.8	245.9554	7.9845	32.1178	10.6837	-35.0854	11.9345
	37	12	25	108.8203	7.0986	116825.4	7620.8	277.2908	7.0986	29.1502	9.4334	-32.1178	10.6837
	36	13	23	79.6701	6.2128	85530.9	6669.8	305.6586	6.2128	26.1826	8.1839	-29.1502	9.4334
	35	14	21	53.4875	5.3270	57422.2	5718.8	331.0588	5.3270	23.2150	6.9354	-26.1826	8.1839
	34	15	19	30.2725	4.4411	32499.4	4767.8	353.4913	4.4411	20.2474	5.6889	-23.2150	6.9354
	33	16	17	10.0251	3.5553	10762.6	3816.8	372.9563	3.5553	17.2798	4.4459	-20.2474	5.6889
	32	17	15	-7.2547	2.6695	-7788.4	2865.9	389.4536	2.6695	14.3122	3.2105	-17.2798	4.4459
	31	18	13	-21.5669	1.7837	-23153.4	1914.9	402.9834	1.7837	11.3446	1.9969	-14.3122	3.2105
	30	19	11	-32.9115	0.8978	-35332.5	963.9	413.5455	0.8978	8.3770	0.8979	-11.3446	1.9969
	29	20	9	-41.2884	0.0115	-44325.7	12.4	421.1400	0.0120	5.2615	0.0126	-8.3770	0.8979
	28	21	7	-46.5499	0.0050	-49974.2	5.4	425.6190	0.0060	2.0078	0.0056	-5.2615	0.0126
	27	22	5	-48.5576	0.0025	-52129.7	2.7	426.8443	0.0041	-0.6012	0.0034	-2.0078	0.0056
	26	23	3	-47.9565	0.0023	-51484.3	2.4	425.4607	0.0039	-2.5663	0.0108	0.6012	0.0034
	25	24	1	-45.3902	0.0105	-48729.3	11.3	422.1120	0.0110	-7.6156	0.1673	2.5663	0.0108
	24	25	-1	-37.7747	0.1670	-40553.5	179.3	413.7140	0.1670	-13.0649	0.5007	7.6156	0.1673
	23	26	-3	-24.7098	0.4720	-26527.6	506.7	399.8667	0.4720	-14.6300	0.9154	13.0649	0.5007
	22	27	-5	-10.0799	0.7843	-10821.4	842.0	384.4543	0.7843	-17.6389	1.3496	14.6300	0.9154
	21	28	-7	7.5590	1.0983	8115.0	1179.1	366.0330	1.0983	-20.9473	1.7923	17.6389	1.3496
	20	29	-9	28.5062	1.4164	30603.2	1520.6	344.3033	1.4164	-23.8869	2.7030	20.9473	1.7923
	19	30	-11	52.3931	2.3022	56247.3	2471.6	319.6339	2.3022			23.8869	2.7030
50	40	10	30	190.3394	9.9185	204341.3	10648.1	205.4081	9.9185	33.5846	13.4167		
	39	11	28	156.7548	9.0350	168286.1	9699.6	238.2102	9.0350	36.4913	12.1687	-33.5846	13.4167
	38	12	26	120.2635	8.1515	129110.4	8751.1	273.9191	8.1515	27.6380	10.9211	-36.4913	12.1687
	37	13	24	92.6255	7.2680	99439.3	7802.6	300.7746	7.2680	30.5447	9.6740	-27.6380	10.9211
	36	14	22	62.0808	6.3845	66647.7	6854.2	330.5369	6.3845	21.6914	8.4275	-30.5447	9.6740
	35	15	20	40.3895	5.5010	43360.6	5905.7	351.4458	5.5010	24.5981	7.1821	-21.6914	8.4275
	34	16	18	15.7914	4.6175	16953.0	4957.2	375.2614	4.6175	15.7448	5.9383	-24.5981	7.1821
	33	17	16	0.0466	3.7340	50.0	4008.7	390.2237	3.7340	18.6515	4.6977	-15.7448	5.9383
	32	18	14	-18.6049	2.8505	-19973.5	3060.2	408.0928	2.8505	9.7982	3.4633	-18.6515	4.6977

A	N	Z	N-Z	MASSEN-EXCESS (MEV)		MASSEN-EXCESS (MICRO-EINH.)		BINDUNGS-ENERGIE (MEV)		NEGATONEN-ZERFALL ENERGIE(MEV)		ELEKTRONEN-EINFANG ENERGIE(MEV)	
	31	19	12	-28.4030	1.9670	-30492.4	2111.7	417.1085	1.9670	12.7049	2.2457	-9.7982	3.4633
	30	20	10	-41.1079	1.0835	-44131.9	1163.2	429.0309	1.0835	3.8516	1.1018	-12.7049	2.2457
	29	21	8	-44.9595	0.2000	-48266.8	214.7	432.1000	0.2000	6.4715	0.2000	-3.8516	1.1018
	28	22	6	-51.4309	0.0037	-55214.3	4.0	437.7890	0.0050	-2.2153	0.0052	-6.4715	0.2000
	27	23	4	-49.2157	0.0037	-52836.1	3.9	434.7913	0.0049	1.0332	0.0053	2.2153	0.0052
	26	24	2	-50.2488	0.0038	-53945.2	4.1	435.0420	0.0050	-7.6308	0.0063	-1.0332	0.0053
	25	25	0	-42.6181	0.0050	-45753.1	5.3	426.6288	0.0059	-8.1024	0.3181	7.6308	0.0063
	24	26	-2	-34.5157	0.3181	-37054.8	341.5	417.7440	0.3181	-16.7663	0.7067	8.1024	0.3181
	23	27	-4	-17.7495	0.6311	-19055.1	677.5	400.1953	0.6311	-13.5179	1.1357	16.7663	0.7067
	22	28	-6	-4.2316	0.9443	-4542.9	1013.7	385.8950	0.9443	-22.3627	1.7324	13.5179	1.1357
	21	29	-8	18.1311	1.4524	19464.8	1559.2	362.7499	1.4524	-19.6242	2.7506	22.3627	1.7324
	20	30	-10	37.7553	2.3359	40532.6	2507.7	342.3432	2.3359	-28.4775	3.9775	19.6242	2.7506
	19	31	-12	66.2328	3.2194	71105.0	3456.2	313.0833	3.2194			28.4775	3.9775
51	41	10	31	214.4381	10.5849	230212.7	11363.6	189.3809	10.5849	38.6351	14.3596		
	40	11	29	175.8030	9.7034	188735.6	10417.3	227.2335	9.7035	35.6132	13.1143	-38.6351	14.3596
	39	12	27	140.1898	8.8220	150502.6	9470.9	262.0642	8.8220	32.5913	11.8692	-35.6132	13.1143
	38	13	25	107.5986	7.9405	115513.8	8524.6	293.8730	7.9405	29.5694	10.6245	-32.5913	11.8692
	37	14	23	78.0291	7.0590	83769.2	7578.2	322.6600	7.0590	26.5475	9.3803	-29.5694	10.6245
	36	15	21	51.4816	6.1775	55268.7	6631.9	348.4251	6.1775	23.5257	8.1369	-26.5475	9.3803
	35	16	19	27.9560	5.2960	30012.5	5685.6	371.1683	5.2960	20.5038	6.8946	-23.5257	8.1369
	34	17	17	7.4522	4.4145	8000.4	4739.2	390.8896	4.4145	17.4819	5.6542	-20.5038	6.8946
	33	18	15	-10.0297	3.5330	-10767.5	3792.9	407.5890	3.5330	14.4600	4.4173	-17.4819	5.6542
	32	19	13	-24.4897	2.6515	-26291.2	2846.5	421.2666	2.6515	11.4381	3.1880	-14.4600	4.4173
	31	20	11	-35.9278	1.7700	-38570.8	1900.2	431.9223	1.7700	8.4163	1.9805	-11.4381	3.1880
	30	21	9	-44.3441	0.8885	-47606.2	953.8	439.5561	0.8885	5.3944	0.8885	-8.4163	1.9805
	29	22	7	-49.7385	0.0061	-53397.4	6.6	444.1680	0.0070	2.4603	0.0068	-5.3944	0.8885
	28	23	5	-52.1987	0.0029	-56038.6	3.1	445.8458	0.0044	-0.7516	0.0042	-2.4603	0.0068
	27	24	3	-51.4472	0.0030	-55231.7	3.3	444.3118	0.0045	-3.1894	0.0500	0.7516	0.0042
	26	25	1	-48.2578	0.0499	-51807.8	53.6	440.3400	0.0500	-8.1176	0.2130	3.1894	0.0500
	25	26	-1	-40.1403	0.2071	-43093.1	222.3	431.4400	0.2071	-12.6458	0.5189	8.1176	0.2130
	24	27	-3	-27.4945	0.4758	-29517.1	510.8	418.0118	0.4758	-15.4836	0.9222	12.6458	0.5189
	23	28	-5	-12.0110	0.7899	-12894.5	848.0	401.7458	0.7899	-18.3894	1.3597	15.4836	0.9222
	22	29	-7	6.3784	1.1068	6847.6	1188.2	382.5740	1.1068	-21.4278	2.2755	18.3894	1.3597
	21	30	-9	27.8061	1.9883	29851.6	2134.5	360.3638	1.9883	-24.4496	3.4912	21.4278	2.2755
	20	31	-11	52.2558	2.8697	56099.9	3080.9	335.1317	2.8698			24.4496	3.4912
52	42	10	32	238.3559	11.4433	255889.9	12285.1	173.5345	11.4433	38.2108	15.5737		
	41	11	30	200.1451	10.5636	214868.3	11340.6	210.9628	10.5636	40.7268	14.3305	-38.2108	15.5737
	40	12	28	159.4183	9.6838	171145.5	10396.1	250.9072	9.6838	32.0429	13.0876	-40.7268	14.3305
	39	13	26	127.3754	8.8040	136745.5	9451.6	282.1676	8.8040	34.5589	11.8449	-32.0429	13.0876
	38	14	24	92.8165	7.9242	99644.3	8507.1	315.9441	7.9242	25.8750	10.6026	-34.5589	11.8449

A	N	Z	N-Z	MASSEN-EXCESS (MEV)		MASSEN-EXCESS (MICRO-EINH.)		BINDUNGS-ENERGIE (MEV)		NEGATONEN-ZERFALL ENERGIE (MEV)		ELEKTRONEN-EINFANG ENERGIE (MEV)	
	37	15	22	66.9415	7.0444	71865.9	7562.6	341.0366	7.0444	28.3911	9.3608	-25.8750	10.6026
	36	16	20	38.5505	6.1646	41386.3	6618.1	368.6452	6.1646	19.7071	8.1198	-28.3911	9.3608
	35	17	18	18.8434	5.2848	20229.5	5673.5	387.5699	5.2848	22.2232	6.8799	-19.7071	8.1198
	34	18	16	-3.3798	4.4050	-3628.4	4729.0	409.0106	4.4050	13.5392	5.6419	-22.2232	6.8799
	33	19	14	-16.9190	3.5252	-18163.6	3784.5	421.7674	3.5252	16.0553	4.4074	-13.5392	5.6419
	32	20	12	-32.9743	2.6454	-35400.0	2840.0	437.0402	2.6454	7.3713	3.1805	-16.0553	4.4074
	31	21	10	-40.3456	1.7656	-43313.6	1895.5	443.6291	1.7656	9.8874	1.9753	-7.3713	3.1805
	30	22	8	-50.2330	0.8858	-53928.3	951.0	452.7340	0.8858	1.2035	0.8858	-9.8874	1.9753
	29	23	6	-51.4365	0.0049	-55220.3	5.3	453.1550	0.0060	3.9745	0.0061	-1.2035	0.8858
	28	24	4	-55.4109	0.0037	-59487.1	3.9	456.3470	0.0050	-4.7086	0.0072	-3.9745	0.0061
	27	25	2	-50.7024	0.0061	-54432.2	6.6	450.8560	0.0070	-2.3746	0.0149	4.7086	0.0072
	26	26	0	-48.3278	0.0136	-51882.9	14.6	447.6990	0.0140	-13.9626	0.3227	2.3746	0.0149
	25	27	-2	-34.3653	0.3224	-36893.3	346.2	432.9540	0.3225	-11.6286	0.7130	13.9626	0.3227
	24	28	-4	-22.7367	0.6359	-24409.3	682.7	420.5430	0.6359	-20.1770	1.1452	11.6286	0.7130
	23	29	-6	-2.5597	0.9524	-2748.0	1022.4	399.5836	0.9524	-17.4957	2.0649	20.1770	1.1452
	22	30	-8	14.9360	1.8322	16034.7	1967.0	381.3054	1.8322	-26.1796	3.2729	17.4957	2.0649
	21	31	-10	41.1156	2.7120	44140.2	2911.5	354.3433	2.7120	-23.6636	4.5006	26.1796	3.2729
	20	32	-12	64.7792	3.5918	69544.5	3856.0	329.8973	3.5918			23.6636	4.5006
53	42	11	31	223.4871	10.5906	239927.4	11369.7	195.6922	10.5906	40.2082	14.3697		
	41	12	29	183.2790	9.7122	196761.5	10426.7	235.1179	9.7122	37.0683	13.1287	-40.2082	14.3697
	40	13	27	146.2107	8.8338	156966.3	9483.7	271.4038	8.8338	33.9284	11.8880	-37.0683	13.1287
	39	14	25	112.2823	7.9554	120542.0	8540.7	304.5498	7.9554	30.7886	10.6477	-33.9284	11.8880
	38	15	23	81.4937	7.0771	87488.6	7597.7	334.5559	7.0771	27.6487	9.4079	-30.7886	10.6477
	37	16	21	53.8450	6.1987	57805.9	6654.7	361.4222	6.1987	24.5089	8.1688	-27.6487	9.4079
	36	17	19	29.3361	5.3203	31494.2	5711.7	385.1486	5.3203	21.3690	6.9308	-24.5089	8.1688
	35	18	17	7.9671	4.4419	8553.2	4768.7	405.7351	4.4419	18.2291	5.6947	-21.3690	6.9308
	34	19	15	-10.2620	3.5635	-11016.9	3825.7	423.1818	3.5635	15.0893	4.4619	-18.2291	5.6947
	33	20	13	-25.3513	2.6851	-27216.2	2882.7	437.4886	2.6851	11.9494	3.2364	-15.0893	4.4619
	32	21	11	-37.3007	1.8068	-40044.7	1939.7	448.6556	1.8068	8.8096	2.0313	-11.9494	3.2364
	31	22	9	-46.1103	0.9284	-49502.3	996.7	456.6827	0.9284	5.6697	0.9297	-8.8096	2.0313
	30	23	7	-51.7800	0.0499	-55589.1	53.5	461.5700	0.0500	3.5005	0.0500	-5.6697	0.9297
	29	24	5	-55.2805	0.0036	-59347.1	3.9	464.2880	0.0050	-0.5977	0.0049	-3.5005	0.0500
	28	25	3	-54.6828	0.0033	-58705.4	3.6	462.9079	0.0048	-3.9845	0.0450	0.5977	0.0049
	27	26	1	-50.6984	0.0449	-54427.9	48.2	458.1410	0.0450	-8.2196	0.2083	3.9845	0.0450
	26	27	-1	-42.4788	0.2034	-45603.7	218.3	449.1390	0.2034	-12.8547	0.5213	8.2196	0.2083
	25	28	-3	-29.6242	0.4800	-31803.4	515.3	435.5019	0.4800	-15.7169	0.9305	12.8547	0.5213
	24	29	-5	-13.9073	0.7971	-14930.4	855.7	419.0026	0.7971	-20.0498	1.4066	15.7169	0.9305
	23	30	-7	6.1425	1.1589	6594.3	1244.2	398.1704	1.1589	-22.2190	2.3438	20.0498	1.4066
	22	31	-9	28.3614	2.0373	30447.8	2187.2	375.1689	2.0373	-25.3588	3.5569	22.2190	2.3438
	21	32	-11	53.7203	2.9157	57672.1	3130.2	349.0277	2.9157	-28.4987	4.7850	25.3588	3.5569

A	N	Z	N-Z	MASSEN-EXCESS (MEV)		MASSEN-EXCESS (MICRO-EINH.)		BINDUNGS-ENERGIE (MEV)		NEGATONEN-ZERFALL ENERGIE (MEV)		ELEKTRONEN-EINFANG ENERGIE (MEV)	
	20	33	-13	82.2190	3.7941	88267.2	4073.2	319.7465	3.7941			28.4987	4.7850
54	43	11	32	248.4051	11.4101	266678.4	12249.5	178.8457	11.4101	45.1341	15.5284		
	42	12	30	203.2709	10.5329	218224.1	11307.7	223.1974	10.5329	36.4679	14.2889	-45.1341	15.5284
	41	13	28	166.8031	9.6556	179073.5	10365.9	258.8829	9.6556	38.7616	13.0496	-36.4679	14.2889
	40	14	26	128.0414	8.7784	137460.5	9424.1	296.8620	8.7784	30.0953	11.8105	-38.7616	13.0496
	39	15	24	97.9461	7.9011	105151.3	8482.4	326.1749	7.9011	32.3891	10.5718	-30.0953	11.8105
	38	16	22	65.5570	7.0239	70379.6	7540.6	357.7815	7.0239	23.7228	9.3336	-32.3891	10.5718
	37	17	20	41.8342	6.1467	44911.6	6598.8	380.7219	6.1467	26.0166	8.0962	-23.7228	9.3336
	36	18	18	15.8177	5.2694	16981.2	5657.1	405.9560	5.2694	17.3503	6.8599	-26.0166	8.0962
	35	19	16	-1.5326	4.3922	-1645.4	4715.3	422.5238	4.3922	19.6440	5.6255	-17.3503	6.8599
	34	20	14	-21.1766	3.5150	-22734.4	3773.5	441.3854	3.5150	10.9777	4.3946	-19.6440	5.6255
	33	21	12	-32.1544	2.6377	-34519.7	2831.8	451.5807	2.6377	13.2715	3.1712	-10.9777	4.3946
	32	22	10	-45.4259	1.7605	-48767.5	1890.0	464.0697	1.7605	4.6052	1.9696	-13.2715	3.1712
	31	23	8	-50.0311	0.8832	-53711.5	948.2	467.8925	0.8832	6.8990	0.8832	-4.6052	1.9696
	30	24	6	-56.9300	0.0048	-61118.0	5.2	474.0090	0.0060	-1.3786	0.0077	-6.8990	0.8832
	29	25	4	-55.5515	0.0060	-59638.0	6.5	471.8480	0.0070	0.6945	0.0078	-1.3786	0.0077
	28	26	2	-56.2459	0.0049	-60383.5	5.2	471.7600	0.0060	-8.2516	0.0087	-0.6945	0.0078
	27	27	0	-47.9944	0.0072	-51525.0	7.7	462.7260	0.0080	-8.6896	0.3244	8.2516	0.0087
	26	28	-2	-39.3048	0.3243	-42196.2	348.2	453.2540	0.3243	-17.3624	0.7208	8.6896	0.3244
	25	29	-4	-21.9425	0.6437	-23556.6	691.0	435.1092	0.6437	-15.4260	1.1567	17.3624	0.7208
	24	30	-6	-6.5165	0.9610	-6995.9	1031.7	418.9008	0.9610	-23.7035	2.0743	15.4260	1.1567
	23	31	-8	17.1869	1.8383	18451.2	1973.5	394.4149	1.8383	-21.4097	3.2792	23.7035	2.0743
	22	32	-10	38.5967	2.7155	41435.9	2915.3	372.2227	2.7155	-30.0760	4.5035	21.4097	3.2792
	21	33	-12	68.6726	3.5927	73724.4	3857.0	341.3643	3.5927			30.0760	4.5035
55	44	11	33	274.1499	11.4006	294317.1	12239.2	161.1724	11.4006	44.7791	15.5155		
	43	12	31	229.3708	10.5242	246243.9	11298.4	205.1690	10.5242	41.5372	14.2773	-44.7791	15.5155
	42	13	29	187.8335	9.6479	201651.1	10357.6	245.9238	9.6479	38.2954	13.0392	-41.5372	14.2773
	41	14	27	149.5382	8.7715	160538.6	9416.8	283.4367	8.7715	35.0535	11.8014	-38.2954	13.0392
	40	15	25	114.4847	7.8952	122906.5	8476.0	317.7078	7.8952	31.8116	10.5640	-35.0535	11.8014
	39	16	23	82.6731	7.0188	88754.7	7535.1	348.7369	7.0188	28.5698	9.3270	-31.8116	10.5640
	38	17	21	54.1033	6.1425	58083.3	6594.3	376.5242	6.1425	25.3279	8.0908	-28.5698	9.3270
	37	18	19	28.7754	5.2661	30892.2	5653.5	401.0697	5.2661	22.0860	6.8558	-25.3279	8.0908
	36	19	17	6.6894	4.3898	7181.5	4712.7	422.3732	4.3898	18.8441	5.6226	-22.0860	6.8558
	35	20	15	-12.1547	3.5134	-13048.9	3771.9	440.4349	3.5134	15.6023	4.3930	-18.8441	5.6226
	34	21	13	-27.7570	2.6371	-29798.9	2831.0	455.2547	2.6371	12.3604	3.1708	-15.6023	4.3930
	33	22	11	-40.1174	1.7607	-43068.5	1890.2	466.8327	1.7607	9.1185	1.9703	-12.3604	3.1708
	32	23	9	-49.2359	0.8843	-52857.9	949.4	475.1688	0.8844	5.8767	0.8844	-9.1185	1.9703
	31	24	7	-55.1126	0.0071	-59166.8	7.6	480.2630	0.0080	2.5925	0.0079	-5.8767	0.8844
	30	25	5	-57.7051	0.0035	-61950.0	3.7	482.0730	0.0050	-0.2323	0.0048	-2.5925	0.0079
	29	26	3	-57.4728	0.0034	-61700.7	3.6	481.0583	0.0049	-3.4589	0.0109	0.2323	0.0048

A	N	Z	N-Z	MASSEN-EXCESS (MEV)		MASSEN-EXCESS (MICRO-EINH.)		BINDUNGS-ENERGIE (MEV)		NEGATONEN-ZERFALL ENERGIE(MEV)		ELEKTRONEN-EINFANG ENERGIE(MEV)	
	28	27	1	-54.0140	0.0104	-57987.4	11.2	476.8170	0.0110	-8.7216	0.1713	3.4589	0.0109
	27	28	-1	-45.2924	0.1710	-48624.2	183.5	467.3130	0.1710	-13.4066	0.5142	8.7216	0.1713
	26	29	-3	-31.8858	0.4849	-34231.4	520.6	453.1239	0.4849	-16.8258	0.9398	13.4066	0.5142
	25	30	-5	-15.0600	0.8050	-16167.9	864.2	435.5157	0.8050	-19.6505	1.3858	16.8258	0.9398
	24	31	-7	4.5904	1.1280	4928.1	1211.0	415.0828	1.1280	-22.9347	2.3000	19.6505	1.3858
	23	32	-9	27.5251	2.0044	29549.9	2151.8	391.3657	2.0044	-26.1765	3.5094	22.9347	2.3000
	22	33	-11	53.7016	2.8807	57652.0	3092.6	364.4067	2.8807	-29.4184	4.7344	26.1765	3.5094
	21	34	-13	83.1200	3.7571	89234.5	4033.5	334.2059	3.7571			29.4184	4.7344
56	44	12	32	252.0912	10.6585	270635.7	11442.6	190.5201	10.6585	40.9022	14.4675		
	43	13	30	211.1889	9.7828	226724.5	10502.5	230.6399	9.7828	43.1411	13.2303	-40.9022	14.4675
	42	14	28	168.0479	8.9071	180409.9	9562.3	272.9985	8.9071	34.3399	11.9933	-43.1411	13.2303
	41	15	26	133.7080	8.0314	143543.9	8622.2	306.5559	8.0314	36.5787	10.7567	-34.3399	11.9933
	40	16	24	97.1293	7.1557	104274.4	7682.1	342.3522	7.1557	27.7775	9.5206	-36.5787	10.7567
	39	17	22	69.3517	6.2800	74453.4	6741.9	369.3473	6.2800	30.0164	8.2852	-27.7775	9.5206
	38	18	20	39.3354	5.4043	42229.0	5801.8	398.5812	5.4043	21.2152	7.0508	-30.0164	8.2852
	37	19	18	18.1202	4.5286	19453.1	4861.7	419.0139	4.5286	23.4540	5.8182	-21.2152	7.0508
	36	20	16	-5.3338	3.6528	-5726.2	3921.6	441.6855	3.6528	14.6528	4.5886	-23.4540	5.8182
	35	21	14	-19.9867	2.7771	-21457.0	2981.4	455.5559	2.7771	16.8917	3.3657	-14.6528	4.5886
	34	22	12	-36.8783	1.9014	-39591.2	2041.3	471.6651	1.9014	8.0905	2.1604	-16.8917	3.3657
	33	23	10	-44.9688	1.0257	-48276.9	1101.2	478.9731	1.0257	10.3293	1.0366	-8.0905	2.1604
	32	24	8	-55.2982	0.1500	-59366.0	161.0	488.5200	0.1500	1.6055	0.1500	-10.3293	1.0366
	31	25	6	-56.9036	0.0047	-61089.6	5.1	489.3430	0.0060	3.7015	0.0067	-1.6055	0.1500
	30	26	4	-60.6051	0.0048	-65063.3	5.1	492.2620	0.0060	-4.5746	0.0095	-3.7015	0.0067
	29	27	2	-56.0305	0.0082	-60152.3	8.8	486.9050	0.0090	-2.1126	0.0176	4.5746	0.0095
	28	28	0	-53.9180	0.0156	-57884.3	16.7	484.0100	0.0160	-15.1973	0.3312	2.1126	0.0176
	27	29	-2	-38.7207	0.3308	-41569.1	355.2	468.0303	0.3308	-12.7353	0.7290	15.1973	0.3312
	26	30	-4	-25.9855	0.6497	-27897.0	697.5	454.5126	0.6497	-21.0113	1.1687	12.7353	0.7290
	25	31	-6	-4.9742	0.9715	-5340.1	1043.0	432.7189	0.9715	-18.9153	1.7349	21.0113	1.1687
	24	32	-8	13.9410	1.4373	14966.6	1543.1	413.0212	1.4374	-27.6391	2.7233	18.9153	1.7349
	23	33	-10	41.5802	2.3131	44638.9	2483.2	384.5996	2.3131	-25.4003	3.9394	27.6391	2.7233
	22	34	-12	66.9805	3.1888	71907.7	3423.3	358.4169	3.1888			25.4003	3.9394
57	45	12	33	269.9873	11.6790	289848.3	12538.1	180.6954	11.6790	44.7042	15.9097		
	44	13	31	225.2831	10.8037	241855.5	11598.4	224.6171	10.8037	41.4518	14.6728	-44.7042	15.9097
	43	14	29	183.8313	9.9284	197354.5	10658.7	265.2864	9.9284	38.1994	13.4362	-41.4518	14.6728
	42	15	27	145.6320	9.0531	156345.1	9719.0	302.7033	9.0531	34.9470	12.1998	-38.1994	13.4362
	41	16	25	110.6850	8.1778	118827.3	8779.3	336.8678	8.1778	31.6945	10.9637	-34.9470	12.1998
	40	17	23	78.9905	7.3025	84801.3	7839.6	367.7799	7.3025	28.4421	9.7280	-31.6945	10.9637
	39	18	21	50.5484	6.4271	54266.8	6899.9	395.4396	6.4272	25.1897	8.4930	-28.4421	9.7280
	38	19	19	25.3586	5.5518	27224.1	5960.3	419.8469	5.5518	21.9373	7.2590	-25.1897	8.4930
	37	20	17	3.4213	4.6765	3673.0	5020.6	441.0018	4.6765	18.6849	6.0265	-21.9373	7.2590



A	N	Z	N-Z	MASSEN-EXCESS (MEV)		MASSEN-EXCESS (MICRO-EINH.)		BINDUNGS-ENERGIE (MEV)		NEGATONEN-ZERFALL ENERGIE (MEV)		ELEKTRONEN-EINFANG ENERGIE (MEV)	
	36	21	15	-15.2636	3.8012	-16386.4	4080.9	458.9042	3.8012	15.4325	4.7969	-18.6849	6.0265
	35	22	13	-30.6961	2.9259	-32954.2	3141.2	473.5543	2.9259	12.1801	3.5730	-15.4325	4.7969
	34	23	11	-42.8762	2.0506	-46030.3	2201.5	484.9519	2.0506	8.9277	2.3635	-12.1801	3.5730
	33	24	9	-51.8039	1.1753	-55614.7	1261.8	493.0972	1.1753	5.6753	1.2130	-8.9277	2.3635
	32	25	7	-57.4792	0.3000	-61707.5	322.0	497.9900	0.3000	2.6965	0.3000	-5.6753	1.2130
	31	26	5	-60.1756	0.0047	-64602.3	5.0	499.9040	0.0060	-0.8368	0.0066	-2.6965	0.3000
	30	27	3	-59.3389	0.0046	-63704.0	4.9	498.2848	0.0059	-3.2354	0.0162	0.8368	0.0066
	29	28	1	-56.1035	0.0156	-60230.6	16.7	494.2670	0.0160	-8.7800	0.1786	3.2354	0.0162
	28	29	-1	-47.3235	0.1779	-50804.8	191.0	484.7046	0.1779	-14.3246	0.5228	8.7800	0.1786
	27	30	-3	-32.9989	0.4917	-35426.4	527.8	469.5975	0.4917	-16.7232	0.9523	14.3246	0.5228
	26	31	-5	-16.2757	0.8156	-17473.0	875.6	452.0919	0.8156	-20.2564	1.6493	16.7232	0.9523
	25	32	-7	3.9807	1.4335	4273.5	1538.9	431.0530	1.4335	-23.2352	2.7176	20.2564	1.6493
	24	33	-9	27.2159	2.3088	29218.0	2478.6	407.0353	2.3088	-26.4876	3.9330	23.2352	2.7176
	23	34	-11	53.7035	3.1841	57654.1	3418.3	379.7653	3.1841	-29.7401	5.1592	26.4876	3.9330
	22	35	-13	83.4436	4.0594	89581.9	4358.0	349.2428	4.0594			29.7401	5.1592
58	46	12	34	275.5743	12.2589	295846.2	13160.7	183.1799	12.2589	41.8394	16.7293		
	45	13	32	233.7349	11.3838	250929.0	12221.2	224.2368	11.3838	44.3569	15.4926	-41.8394	16.7293
	44	14	30	189.3780	10.5086	203309.2	11281.7	267.8112	10.5086	35.5143	14.2561	-44.3569	15.4926
	43	15	28	153.8637	9.6335	165182.3	10342.2	302.5431	9.6335	38.0318	13.0197	-35.5143	14.2561
	42	16	26	115.8319	8.7584	124352.8	9402.6	339.7924	8.7584	29.1892	11.7836	-38.0318	13.0197
	41	17	24	86.6427	7.8832	93016.3	8463.1	368.1992	7.8832	31.7067	10.5479	-29.1892	11.7836
	40	18	22	54.9360	7.0081	58977.2	7523.6	399.1235	7.0081	22.8642	9.3127	-31.7067	10.5479
	39	19	20	32.0718	6.1329	34431.1	6584.1	421.2052	6.1330	25.3816	8.0782	-22.8642	9.3127
	38	20	18	6.6902	5.2578	7182.3	5644.6	445.8043	5.2578	16.5391	6.8449	-25.3816	8.0782
	37	21	16	-9.8489	4.3827	-10573.4	4705.1	461.5610	4.3827	19.0565	5.6134	-16.5391	6.8449
	36	22	14	-28.9054	3.5075	-31031.8	3765.6	479.8351	3.5075	10.2140	4.3855	-19.0565	5.6134
	35	23	12	-39.1194	2.6324	-41997.2	2826.1	489.2666	2.6324	12.7315	3.1651	-10.2140	4.3855
	34	24	10	-51.8509	1.7573	-55665.2	1886.5	501.2156	1.7573	3.8889	1.9662	-12.7315	3.1651
	33	25	8	-55.7398	0.8821	-59840.2	947.0	504.3221	0.8821	6.4064	0.8821	-3.8889	1.9662
	32	26	6	-62.1462	0.0059	-66717.8	6.3	509.9460	0.0070	-2.3086	0.0083	-6.4064	0.8821
	31	27	4	-59.8376	0.0059	-64239.4	6.3	506.8550	0.0070	0.3895	0.0083	2.3086	0.0083
	30	28	2	-60.2271	0.0059	-64657.5	6.3	506.4620	0.0070	-8.5686	0.0092	-0.3895	0.0083
	29	29	0	-51.6585	0.0071	-55458.7	7.6	497.1110	0.0080	-9.2399	0.3331	8.5686	0.0092
	28	30	-2	-42.4186	0.3330	-45539.0	357.5	487.0886	0.3331	-18.1980	0.7385	9.2399	0.3331
	27	31	-4	-24.2206	0.6591	-26002.4	707.6	468.1082	0.6591	-15.4999	1.1853	18.1980	0.7385
	26	32	-6	-8.7207	0.9851	-9362.2	1057.6	451.8258	0.9852	-24.2149	2.1050	15.4999	1.1853
	25	33	-8	15.4942	1.8603	16634.0	1997.1	426.8285	1.8603	-21.6974	3.3081	24.2149	2.1050
	24	34	-10	37.1916	2.7354	39927.5	2936.6	404.3486	2.7354	-30.5399	4.5298	21.6974	3.3081
	23	35	-12	67.7315	3.6106	72714.0	3876.2	373.0263	3.6106			30.5399	4.5298
59	46	13	33	235.7898	11.3835	253135.1	12220.9	230.2533	11.3835	41.0953	15.4922		

A	N	Z	N-Z	MASSEN-EXCESS (MEV)		MASSEN-EXCESS (MICRO-EINH.)		BINDUNGS-ENERGIE (MEV)		NEGATONEN-ZERFALL ENERGIE (MEV)		ELEKTRONEN-EINFANG ENERGIE (MEV)	
	45	14	31	194.6945	10.5083	209016.8	11281.3	270.5662	10.5083	38.0467	14.2556	-41.0953	15.4922
	44	15	29	156.6478	9.6331	168171.2	10341.7	307.8304	9.6331	34.9981	13.0191	-38.0467	14.2556
	43	16	27	121.6497	8.7579	130598.6	9402.2	342.0461	8.7579	31.9495	11.7830	-34.9981	13.0191
	42	17	25	89.7002	7.8827	96298.7	8462.6	373.2132	7.8827	28.9010	10.5472	-31.9495	11.7830
	41	18	23	60.7992	7.0075	65271.8	7523.0	401.3317	7.0075	25.8524	9.3119	-28.9010	10.5472
	40	19	21	34.9468	6.1323	37517.6	6583.5	426.4016	6.1323	22.8038	8.0773	-25.8524	9.3119
	39	20	19	12.1430	5.2572	13036.3	5643.9	448.4230	5.2572	19.7552	6.8439	-22.8038	8.0773
	38	21	17	-7.6122	4.3820	-8172.2	4704.3	467.3958	4.3820	16.7067	5.6124	-19.7552	6.8439
	37	22	15	-24.3189	3.5068	-26107.9	3764.7	483.3200	3.5068	13.6581	4.3844	-16.7067	5.6124
	36	23	13	-37.9770	2.6316	-40770.7	2825.2	496.1956	2.6316	10.6095	3.1639	-13.6581	4.3844
	35	24	11	-48.5865	1.7564	-52160.6	1885.6	506.0226	1.7564	7.5609	1.9650	-10.6095	3.1639
	34	25	9	-56.1474	0.8812	-60277.7	946.0	512.8011	0.8812	4.5124	0.8812	-7.5609	1.9650
	33	26	7	-60.6597	0.0046	-65122.0	4.9	516.5310	0.0060	1.5725	0.0065	-4.5124	0.8812
	32	27	5	-62.2322	0.0046	-66810.2	4.9	517.3210	0.0060	-1.0723	0.0061	-1.5725	0.0065
	31	28	3	-61.1599	0.0040	-65659.0	4.2	515.4663	0.0055	-4.8019	0.0210	1.0723	0.0061
	30	29	1	-56.3581	0.0207	-60503.9	22.2	509.8820	0.0210	-9.0277	0.1863	4.8019	0.0210
	29	30	-1	-47.3304	0.1852	-50812.1	198.8	500.0718	0.1852	-13.2536	0.5315	9.0277	0.1863
	28	31	-3	-34.0767	0.4982	-36583.5	534.8	486.0358	0.4982	-16.9832	0.9656	13.2536	0.5315
	27	32	-5	-17.0935	0.8272	-18351.0	888.0	468.2701	0.8272	-19.6279	1.4212	16.9832	0.9656
	26	33	-7	2.5344	1.1556	2720.8	1240.6	447.8597	1.1556	-22.5678	2.3366	19.6279	1.4212
	25	34	-9	25.1022	2.0308	26948.8	2180.2	424.5095	2.0308	-25.6164	3.5453	22.5678	2.3366
	24	35	-11	50.7186	2.9060	54449.6	3119.8	398.1106	2.9060	-28.6650	4.7689	25.6164	3.5453
	23	36	-13	79.3835	3.7812	85223.2	4059.4	368.6632	3.7812			28.6650	4.7689
60	47	13	34	238.8448	11.4122	256414.9	12251.7	235.2697	11.4122	43.3147	15.5325		
	46	14	32	195.5302	10.5367	209913.9	11311.8	277.8019	10.5367	34.6663	14.2955	-43.3147	15.5325
	45	15	30	160.8639	9.6612	172697.5	10371.9	311.6858	9.6612	37.4579	13.0586	-34.6663	14.2955
	44	16	28	123.4060	8.7857	132484.1	9432.0	348.3612	8.7857	28.8095	11.8221	-37.4579	13.0586
	43	17	26	94.5965	7.9103	101555.3	8492.2	376.3882	7.9103	31.6011	10.5859	-28.8095	11.8221
	42	18	24	62.9954	7.0348	67629.5	7552.3	407.2069	7.0348	22.9527	9.3502	-31.6011	10.5859
	41	19	22	40.0427	6.1593	42988.4	6612.4	429.3771	6.1593	25.7443	8.1152	-22.9527	9.3502
	40	20	20	14.2984	5.2838	15350.2	5672.5	454.3390	5.2838	17.0959	6.8813	-25.7443	8.1152
	39	21	18	-2.7975	4.4084	-3003.3	4732.7	470.6525	4.4084	19.8875	5.6493	-17.0959	6.8813
	38	22	16	-22.6851	3.5329	-24353.8	3792.8	489.7576	3.5329	11.2392	4.4208	-19.8875	5.6493
	37	23	14	-33.9242	2.6574	-36419.8	2852.9	500.2143	2.6574	14.0308	3.1996	-11.2392	4.4208
	36	24	12	-47.9550	1.7819	-51482.7	1913.0	513.4626	1.7819	5.3824	1.9993	-14.0308	3.1996
	35	25	10	-53.3373	0.9065	-57261.0	973.1	518.0625	0.9065	8.1740	0.9070	-5.3824	1.9993
	34	26	8	-61.5113	0.0307	-66036.2	33.0	525.4540	0.0310	0.1405	0.0311	-8.1740	0.9070
	33	27	6	-61.6518	0.0045	-66187.0	4.9	524.8120	0.0060	2.8185	0.0074	-0.1405	0.0311
	32	28	4	-64.4702	0.0058	-69212.8	6.2	526.8480	0.0070	-6.1246	0.0109	-2.8185	0.0074
	31	29	2	-58.3457	0.0092	-62637.7	9.9	519.9410	0.0100	-4.1487	0.0276	6.1246	0.0109

A	N	Z	N-Z	MASSEN-EXCESS (MEV)		MASSEN-EXCESS (MICRO-EINH.)		BINDUNGS-ENERGIE (MEV)		NEGATONEN-ZERFALL ENERGIE (MEV)		ELEKTRONEN-EINFANG ENERGIE (MEV)	
	30	30	0	-54.1970	0.0260	-58183.9	27.9	515.0099	0.0263	-14.1523	0.3421	4.1487	0.0276
	29	31	-2	-40.0447	0.3411	-42990.5	366.2	500.0752	0.3411	-12.1764	0.7511	14.1523	0.3421
	28	32	-4	-27.8684	0.6692	-29918.5	718.5	487.1164	0.6692	-21.1194	1.2027	12.1764	0.7511
	27	33	-6	-6.7490	0.9993	-7245.5	1072.9	465.2146	0.9994	-18.4414	1.6840	21.1194	1.2027
	26	34	-8	11.6923	1.3555	12552.4	1455.2	445.9908	1.3555	-26.4749	2.6104	18.4414	1.6840
	25	35	-10	38.1672	2.2309	40974.9	2395.1	418.7334	2.2309	-23.6833	3.8245	26.4749	2.6104
	24	36	-12	61.8505	3.1064	66400.4	3334.9	394.2677	3.1064			23.6833	3.8245
61	48	13	35	238.8607	12.3047	256432.0	13209.9	243.3253	12.3047	39.8779	16.7935		
	47	14	33	198.9828	11.4288	213620.5	12269.5	282.4207	11.4288	37.0592	15.5556	-39.8779	16.7935
	46	15	31	161.9236	10.5528	173835.1	11329.1	318.6975	10.5528	34.2406	14.3179	-37.0592	15.5556
	45	16	29	127.6830	9.6768	137075.7	10388.7	352.1556	9.6768	31.4219	13.0803	-34.2406	14.3179
	44	17	27	96.2611	8.8008	103342.4	9448.2	382.7951	8.8008	28.6032	11.8430	-31.4219	13.0803
	43	18	25	67.6579	7.9248	72635.0	8507.8	410.6158	7.9248	25.7845	10.6061	-28.6032	11.8430
	42	19	23	41.8734	7.0489	44953.7	7567.4	435.6179	7.0489	22.9658	9.3697	-25.7845	10.6061
	41	20	21	18.9076	6.1729	20298.5	6627.0	457.8013	6.1729	20.1472	8.1340	-22.9658	9.3697
	40	21	19	-1.2396	5.2969	-1330.8	5686.5	477.1660	5.2969	17.3285	6.8994	-20.1472	8.1340
	39	22	17	-18.5681	4.4209	-19934.0	4746.1	493.7120	4.4209	14.5098	5.6667	-17.3285	6.8994
	38	23	15	-33.0779	3.5449	-35511.2	3805.7	507.4394	3.5449	11.6911	4.4373	-14.5098	5.6667
	37	24	13	-44.7690	2.6689	-48062.3	2865.3	518.3481	2.6689	8.8724	3.2153	-11.6911	4.4373
	36	25	11	-53.6415	1.7930	-57587.5	1924.9	526.4380	1.7930	6.0538	2.0138	-8.8724	3.2153
	35	26	9	-59.6952	0.9170	-64086.6	984.4	531.7094	0.9170	3.2351	0.9179	-6.0538	2.0138
	34	27	7	-62.9303	0.0408	-67559.6	43.8	534.1620	0.0410	1.2895	0.0414	-3.2351	0.9179
	33	28	5	-64.2198	0.0069	-68943.9	7.4	534.6690	0.0080	-2.2356	0.0098	-1.2895	0.0414
	32	29	3	-61.9842	0.0070	-66543.9	7.5	531.6510	0.0080	-5.3986	0.2001	2.2356	0.0098
	31	30	1	-56.5857	0.2000	-60748.3	214.7	525.4700	0.2000	-9.2724	0.4179	5.3986	0.2001
	30	31	-1	-47.3132	0.3670	-50793.7	394.0	515.4151	0.3670	-13.1463	0.6275	9.2724	0.4179
	29	32	-3	-34.1669	0.5090	-36680.3	546.5	501.4864	0.5090	-16.3093	0.9848	13.1463	0.6275
	28	33	-5	-17.8576	0.8430	-19171.3	905.1	484.3946	0.8431	-19.8343	1.4748	16.3093	0.9848
	27	34	-7	1.9767	1.2101	2122.1	1299.1	463.7778	1.2101	-21.7800	2.4116	19.8343	1.4748
	26	35	-9	23.7567	2.0861	25504.3	2239.5	441.2154	2.0861	-24.5986	3.6229	21.7800	2.4116
	25	36	-11	48.3553	2.9620	51912.4	3179.9	415.8344	2.9620	-27.4173	4.8481	24.5986	3.6229
	24	37	-13	75.7726	3.8380	81346.6	4120.4	387.6346	3.8380			27.4173	4.8481
62	48	14	34	200.1200	11.4383	214841.3	12279.8	289.3550	11.4383	33.8927	15.5687		
	47	15	32	166.2273	10.5616	178455.4	11338.6	322.4653	10.5616	36.6938	14.3299	-33.8927	15.5687
	46	16	30	129.5335	9.6849	139062.3	10397.3	358.3766	9.6849	28.4548	13.0913	-36.6938	14.3299
	45	17	28	101.0787	8.8082	108514.3	9456.1	386.0489	8.8082	31.2559	11.8529	-28.4548	13.0913
	44	18	26	69.8228	7.9315	74959.2	8514.9	416.5224	7.9315	23.0169	10.6150	-31.2559	11.8529
	43	19	24	46.8059	7.0547	50249.0	7573.7	438.7569	7.0547	25.8180	9.3775	-23.0169	10.6150
	42	20	22	20.9879	6.1780	22531.8	6632.5	463.7924	6.1780	17.5791	8.1408	-25.8180	9.3775
	41	21	20	3.4088	5.3013	3659.5	5691.3	480.5890	5.3013	20.3801	6.9051	-17.5791	8.1408

A	N	Z	N-Z	MASSEN-EXCESS (MEV)		MASSEN-EXCESS (MICRO-EINH.)		BINDUNGS-ENERGIE (MEV)		NEGATONEN-ZERFALL ENERGIE(MEV)		ELEKTRONEN-EINFANG ENERGIE(MEV)	
	40	22	18	-16.9713	4.4246	-18219.8	4750.1	500.1867	4.4246	12.1412	5.6714	-20.3801	6.9051
	39	23	16	-29.1125	3.5479	-31254.1	3808.9	511.5454	3.5479	14.9423	4.4410	-12.1412	5.6714
	38	24	14	-44.0548	2.6712	-47295.5	2867.6	525.7052	2.6712	6.7033	3.2179	-14.9423	4.4410
	37	25	12	-50.7581	1.7944	-54492.0	1926.4	531.6261	1.7944	9.5044	2.0155	-6.7033	3.2179
	36	26	10	-60.2624	0.9177	-64695.5	985.2	540.3480	0.9177	1.2654	0.9186	-9.5044	2.0155
	35	27	8	-61.5279	0.0408	-66054.0	43.8	540.8310	0.0410	5.2205	0.0412	-1.2654	0.9186
	34	28	6	-66.7483	0.0057	-71658.5	6.1	545.2690	0.0070	-3.9346	0.0117	-5.2205	0.0412
	33	29	4	-62.8138	0.0102	-67434.5	11.0	540.5520	0.0110	-1.6906	0.0169	3.9346	0.0117
	32	30	2	-61.1232	0.0134	-65619.6	14.4	538.0790	0.0140	-9.6103	0.8908	1.6906	0.0169
	31	31	0	-51.5129	0.8907	-55302.3	956.2	527.6862	0.8907	-9.1770	0.9574	9.6103	0.8908
	30	32	-2	-42.3359	0.3512	-45450.2	377.0	517.7267	0.3512	-17.0968	0.7701	9.1770	0.9574
	29	33	-4	-25.2391	0.6854	-27095.7	735.8	499.8475	0.6854	-14.8528	1.2277	17.0968	0.7701
	28	34	-6	-10.3863	1.0186	-11150.3	1093.5	484.2122	1.0186	-24.0078	1.7231	14.8528	1.2277
	27	35	-8	13.6215	1.3898	14623.6	1492.0	459.4220	1.3898	-20.0528	2.6587	24.0078	1.7231
	26	36	-10	33.6743	2.2665	36151.5	2433.3	438.5868	2.2665	-28.2917	3.8752	20.0528	2.6587
	25	37	-12	61.9660	3.1432	66524.4	3374.5	409.5126	3.1432			28.2917	3.8752
63	49	14	35	205.5937	11.6099	220717.7	12464.0	291.9527	11.6099	36.3688	15.8105		
	48	15	33	169.2248	10.7322	181673.5	11521.7	327.5391	10.7322	33.7370	14.5703	-36.3688	15.8105
	47	16	31	135.4879	9.8546	145454.7	10579.5	360.4937	9.8546	31.1051	13.3303	-33.7370	14.5703
	46	17	29	104.3828	8.9769	112061.4	9637.2	390.8163	8.9769	28.4732	12.0905	-31.1051	13.3303
	45	18	27	75.9095	8.0992	81493.6	8695.0	418.5071	8.0992	25.8414	10.8511	-28.4732	12.0905
	44	19	25	50.0682	7.2215	53751.3	7752.7	443.5660	7.2215	23.2095	9.6122	-25.8414	10.8511
	43	20	23	26.8587	6.3438	28834.5	6810.5	465.9930	6.3438	20.5776	8.3739	-23.2095	9.6122
	42	21	21	6.2811	5.4661	6743.1	5868.2	485.7882	5.4661	17.9458	7.1367	-20.5776	8.3739
	41	22	19	-11.6647	4.5884	-12522.8	4926.0	502.9515	4.5884	15.3139	5.9011	-17.9458	7.1367
	40	23	17	-26.9786	3.7107	-28963.2	3983.7	517.4829	3.7108	12.6820	4.6686	-15.3139	5.9011
	39	24	15	-39.6606	2.8331	-42578.1	3041.5	529.3825	2.8331	10.0502	3.4423	-12.6820	4.6686
	38	25	13	-49.7107	1.9554	-53367.6	2099.2	538.6502	1.9554	7.4183	2.2327	-10.0502	3.4423
	37	26	11	-57.1290	1.0777	-61331.6	1157.0	545.2860	1.0777	4.7864	1.0961	-7.4183	2.2327
	36	27	9	-61.9154	0.2000	-66470.1	214.7	549.2900	0.2000	3.6005	0.2000	-4.7864	1.0961
	35	28	7	-65.5159	0.0056	-70335.4	6.0	552.1080	0.0070	0.0675	0.0080	-3.6005	0.2000
	34	29	5	-65.5833	0.0057	-70407.8	6.1	551.3930	0.0070	-3.3666	0.0080	-0.0675	0.0080
	33	30	3	-62.2168	0.0057	-66793.6	6.1	547.2440	0.0070	-5.7411	0.8847	3.3666	0.0080
	32	31	1	-56.4757	0.8847	-60630.2	949.8	540.7205	0.8847	-9.5142	1.3769	5.7411	0.8847
	31	32	-1	-46.9615	1.0550	-50416.1	1132.6	530.4238	1.0550	-13.2874	1.1753	9.5142	1.3769
	30	33	-3	-33.6741	0.5180	-36151.3	556.1	516.3540	0.5180	-15.6619	1.0028	13.2874	1.1753
	29	34	-5	-18.0123	0.8587	-19337.3	921.9	499.9097	0.8587	-19.0959	1.4751	15.6619	1.0028
	28	35	-7	1.0836	1.1994	1163.3	1287.6	480.0314	1.1994	-22.6289	2.1076	19.0959	1.4751
	27	36	-9	23.7125	1.7331	25456.8	1860.6	456.6201	1.7331	-23.8148	3.1336	22.6289	2.1076
	26	37	-11	47.5273	2.6108	51023.5	2802.8	432.0228	2.6108	-26.4467	4.3572	23.8148	3.1336

A	N	Z	N-Z	MASSEN-EXCESS (MEV)		MASSEN-EXCESS (MICRO-EINH.)		BINDUNGS-ENERGIE (MEV)		NEGATONEN-ZERFALL ENERGIE(MEV)		ELEKTRONEN-EINFANG ENERGIE(MEV)	
	25	38	-13	73.9740	3.4885	79415.7	3745.1	404.7936	3.4885			26.4467	4.3572
64	50	14	36	206.2360	12.3115	221407.3	13217.2	299.3818	12.3115	33.4235	16.8012		
	49	15	34	172.8126	11.4326	185525.1	12273.6	332.0228	11.4326	36.2328	15.5591	-33.4235	16.8012
	48	16	32	136.5797	10.5537	146626.9	11330.1	367.4732	10.5537	28.3222	14.3173	-36.2328	15.5591
	47	17	30	108.2575	9.6748	116221.3	10386.6	395.0130	9.6748	31.1316	13.0756	-28.3222	14.3173
	46	18	28	77.1260	8.7960	82799.6	9443.0	425.3621	8.7960	23.2210	11.8342	-31.1316	13.0756
	45	19	26	53.9050	7.9171	57870.4	8499.5	447.8006	7.9171	26.0303	10.5932	-23.2210	11.8342
	44	20	24	27.8747	7.0382	29925.2	7555.9	473.0485	7.0382	18.1197	9.3527	-26.0303	10.5932
	43	21	22	9.7550	6.1593	10472.6	6612.4	490.3857	6.1593	20.9291	8.1129	-18.1197	9.3527
	42	22	20	-11.1741	5.2804	-11996.1	5668.8	510.5324	5.2804	13.0185	6.8742	-20.9291	8.1129
	41	23	18	-24.1926	4.4015	-25972.2	4725.3	522.7684	4.4015	15.8278	5.6375	-13.0185	6.8742
	40	24	16	-40.0204	3.5226	-42964.4	3781.7	537.8137	3.5226	7.9172	4.4043	-15.8278	5.6375
	39	25	14	-47.9376	2.6437	-51464.0	2838.2	544.9485	2.6437	10.7266	3.1786	-7.9172	4.4043
	38	26	12	-58.6642	1.7648	-62979.7	1894.6	554.8926	1.7648	2.8160	1.9747	-10.7266	3.1786
	37	27	10	-61.4801	0.8859	-66002.8	951.1	556.9261	0.8859	5.6253	0.8859	-2.8160	1.9747
	36	28	8	-67.1054	0.0056	-72041.9	6.0	561.7690	0.0070	-1.6776	0.0079	-5.6253	0.8859
	35	29	6	-65.4279	0.0056	-70240.9	6.0	559.3090	0.0070	0.5725	0.0079	1.6776	0.0079
	34	30	4	-66.0003	0.0056	-70855.5	6.0	559.0990	0.0070	-7.0726	0.0312	-0.5725	0.0079
	33	31	2	-58.9278	0.0307	-63262.7	33.0	551.2440	0.0310	-4.5772	0.9104	7.0726	0.0312
	32	32	0	-54.3506	0.9099	-58348.8	976.8	545.8844	0.9099	-14.6909	0.9843	4.5772	0.9104
	31	33	-2	-39.6597	0.3755	-42577.2	403.1	530.4110	0.3755	-12.1956	0.7908	14.6909	0.9843
	30	34	-4	-27.4641	0.6960	-29484.5	747.2	517.4330	0.6960	-19.8406	1.2518	12.1956	0.7908
	29	35	-6	-7.6236	1.0405	-8184.4	1117.0	496.8100	1.0405	-17.5906	1.7323	19.8406	1.2518
	28	36	-8	9.9670	1.3850	10700.2	1486.9	478.4370	1.3850	-24.8934	2.6539	17.5906	1.7323
	27	37	-10	34.8604	2.2639	37424.8	2430.4	452.7611	2.2639	-22.0841	3.8733	24.8934	2.6539
	26	38	-12	56.9445	3.1428	61133.4	3374.0	429.8946	3.1428			22.0841	3.8733
65	51	14	37	214.2727	12.3339	230035.1	13241.2	299.4166	12.3339	36.1449	16.8318		
	50	15	35	178.1277	11.4535	191231.3	12296.1	334.7791	11.4536	33.6546	15.5877	-36.1449	16.8318
	49	16	33	144.4731	10.5732	155100.9	11351.0	367.6513	10.5732	31.1643	14.3438	-33.6546	15.5877
	48	17	31	113.3088	9.6929	121644.1	10405.9	398.0331	9.6929	28.6740	13.1001	-31.1643	14.3438
	47	18	29	84.6349	8.8125	90860.8	9460.8	425.9246	8.8125	26.1837	11.8566	-28.6740	13.1001
	46	19	27	58.4512	7.9322	62751.0	8515.7	451.3258	7.9322	23.6933	10.6135	-26.1837	11.8566
	45	20	25	34.7579	7.0518	37314.8	7570.5	474.2367	7.0518	21.2030	9.3709	-23.6933	10.6135
	44	21	23	13.5549	6.1714	14552.0	6625.4	494.6573	6.1715	18.7127	8.1291	-21.2030	9.3709
	43	22	21	-5.1578	5.2911	-5537.2	5680.3	512.5875	5.2911	16.2224	6.8884	-18.7127	8.1291
	42	23	19	-21.3801	4.4107	-22952.9	4735.2	528.0274	4.4108	13.7320	5.6496	-16.2224	6.8884
	41	24	17	-35.1122	3.5304	-3795.1	3790.1	540.9770	3.5304	11.2417	4.4143	-13.7320	5.6496
	40	25	15	-46.3538	2.6500	-49763.8	2845.0	551.4362	2.6501	8.7514	3.1866	-11.2417	4.4143
	39	26	13	-55.1052	1.7697	-59158.9	1899.9	559.4051	1.7697	6.2611	1.9806	-8.7514	3.1866
	38	27	11	-61.3663	0.8893	-65880.5	954.8	564.8837	0.8894	3.7707	0.8894	-6.2611	1.9806

A	N	Z	N-Z	MASSEN-EXCESS (MEV)		MASSEN-EXCESS (MICRO-EINH.)		BINDUNGS-ENERGIE (MEV)		NEGATONEN-ZERFALL ENERGIE (MEV)		ELEKTRONEN-EINFANG ENERGIE (MEV)	
	37	28	9	-65.1370	0.0079	-69928.7	8.5	567.8720	0.0090	2.1295	0.0096	-3.7707	0.8894
	36	29	7	-67.2665	0.0055	-72214.7	5.9	569.2190	0.0070	-1.3496	0.0079	-2.1295	0.0096
	35	30	5	-65.9169	0.0056	-70765.9	6.0	567.0870	0.0070	-3.2596	0.0174	1.3496	0.0079
	34	31	3	-62.6574	0.0165	-67266.6	17.7	563.0450	0.0170	-6.1906	0.8975	3.2596	0.0174
	33	32	1	-56.4668	0.8973	-60620.6	963.4	556.0720	0.8974	-9.7532	1.3978	6.1906	0.8975
	32	33	-1	-46.7136	1.0717	-50149.9	1150.5	545.5363	1.0717	-13.3159	1.2000	9.7532	1.3978
	31	34	-3	-33.3977	0.5400	-35854.5	579.7	531.4380	0.5400	-16.2469	1.0313	13.3159	1.2000
	30	35	-5	-17.1508	0.8787	-18412.5	943.3	514.4087	0.8787	-18.1569	1.5095	16.2469	1.0313
	29	36	-7	1.0060	1.2273	1080.0	1317.6	495.4694	1.2274	-21.6359	1.9991	18.1569	1.5095
	28	37	-9	22.6419	1.5780	24307.5	1694.1	473.0511	1.5780	-23.2772	2.9213	21.6359	1.9991
	27	38	-11	45.9191	2.4584	49297.0	2639.2	448.9915	2.4584	-25.7675	4.1462	23.2772	2.9213
	26	39	-13	71.6865	3.3387	76960.0	3584.3	422.4415	3.3387			25.7675	4.1462
66	51	15	36	187.7262	11.4988	201535.9	12344.7	333.2521	11.4988	36.6220	15.6505		
	50	16	34	151.1042	10.6168	162219.8	11397.7	369.0916	10.6168	28.9351	14.4042	-36.6220	15.6505
	49	17	32	122.1691	9.7347	131156.2	10450.8	397.2443	9.7347	31.7281	13.1580	-28.9351	14.4042
	48	18	30	90.4411	8.8526	97094.2	9503.9	428.1899	8.8526	24.0411	11.9121	-31.7281	13.1580
	47	19	28	66.4000	7.9706	71284.5	8556.9	451.4485	7.9706	26.8341	10.6666	-24.0411	11.9121
	46	20	26	39.5659	7.0885	42476.4	7610.0	477.5002	7.0885	19.1471	9.4216	-26.8341	10.6666
	45	21	24	20.4188	6.2064	21920.8	6663.0	495.8648	6.2064	21.9401	8.1773	-19.1471	9.4216
	44	22	22	-1.5214	5.3244	-1633.3	5716.1	517.0225	5.3244	14.2532	6.9342	-21.9401	8.1773
	43	23	20	-15.7745	4.4423	-16935.0	4769.1	530.4932	4.4423	17.0462	5.6929	-14.2532	6.9342
	42	24	18	-32.8207	3.5602	-35235.1	3822.2	546.7570	3.5603	9.3592	4.4551	-17.0462	5.6929
	41	25	16	-42.1799	2.6782	-45282.8	2875.2	555.3337	2.6782	12.1522	3.2247	-9.3592	4.4551
	40	26	14	-54.3321	1.7961	-58328.9	1928.2	566.7034	1.7961	4.4652	2.0153	-12.1522	3.2247
	39	27	12	-58.7973	0.9141	-63122.6	981.3	570.3862	0.9141	7.2582	0.9146	-4.4652	2.0153
	38	28	10	-66.0556	0.0317	-70914.8	34.0	576.8620	0.0320	0.1995	0.0329	-7.2582	0.9146
	37	29	8	-66.2550	0.0090	-71128.9	9.7	576.2790	0.0100	2.6265	0.0112	-0.1995	0.0329
	36	30	6	-68.8815	0.0067	-73948.6	7.2	578.1230	0.0080	-5.1756	0.0095	-2.6265	0.0112
	35	31	4	-63.7059	0.0068	-68392.3	7.2	572.1650	0.0080	-2.9726	0.1501	5.1756	0.0095
	34	32	2	-60.7334	0.1499	-65201.1	161.0	568.4100	0.1500	-10.2167	1.0429	2.9726	0.1501
	33	33	0	-50.5167	1.0321	-54232.8	1108.0	557.4109	1.0321	-9.5267	1.1482	10.2167	1.0429
	32	34	-2	-40.9899	0.5032	-44005.3	540.2	547.1017	0.5032	-16.7709	0.8739	9.5267	1.1482
	31	35	-4	-24.2191	0.7145	-26000.7	767.0	529.5484	0.7145	-14.5679	1.2847	16.7709	0.8739
	30	36	-6	-9.6512	1.0677	-10361.2	1146.3	514.1981	1.0677	-22.3699	1.7790	14.5679	1.2847
	29	37	-8	12.7186	1.4230	13654.3	1527.6	491.0458	1.4230	-19.9429	2.2931	22.3699	1.7790
	28	38	-10	32.6615	1.7982	35064.2	1930.5	470.3204	1.7982	-27.0017	3.2276	19.9429	2.2931
	27	39	-12	59.6632	2.6803	64052.1	2877.4	442.5363	2.6803			27.0017	3.2276
67	52	15	37	196.9662	11.7926	211455.6	12660.1	332.0835	11.7926	34.4961	16.0643		
	51	16	35	162.4702	10.9086	174421.9	11711.0	365.7971	10.9086	32.0822	14.8151	-34.4961	16.0643
	50	17	33	130.3880	10.0245	139979.7	10761.9	397.0968	10.0245	29.6683	13.5661	-32.0822	14.8151

A	N	Z	N-Z	MASSEN-EXCESS (MEV)		MASSEN-EXCESS (MICRO-EINH.)		BINDUNGS-ENERGIE (MEV)		NEGATONEN-ZERFALL ENERGIE (MEV)		ELEKTRONEN-EINFANG ENERGIE (MEV)	
	49	18	31	100.7197	9.1405	108128.9	9812.9	425.9827	9.1405	27.2544	12.3173	-29.6683	13.5661
	48	19	29	73.4653	8.2564	78869.6	8863.8	452.4546	8.2564	24.8405	11.0689	-27.2544	12.3173
	47	20	27	48.6248	7.3724	52201.7	7914.7	476.5127	7.3724	22.4267	9.8209	-24.8405	11.0689
	46	21	25	26.1981	6.4883	28125.3	6965.6	498.1569	6.4883	20.0128	8.5736	-22.4267	9.8209
	45	22	23	6.1853	5.6043	6640.3	6016.5	517.3873	5.6043	17.5989	7.3272	-20.0128	8.5736
	44	23	21	-11.4136	4.7202	-12253.2	5067.5	534.2037	4.7202	15.1850	6.0825	-17.5989	7.3272
	43	24	19	-26.5986	3.8362	-28555.3	4118.4	548.6063	3.8362	12.7712	4.8406	-15.1850	6.0825
	42	25	17	-39.3698	2.9521	-42265.9	3169.3	560.5950	2.9521	10.3573	3.6045	-12.7712	4.8406
	41	26	15	-49.7271	2.0681	-53385.1	2220.2	570.1699	2.0681	7.9434	2.3831	-10.3573	3.6045
	40	27	13	-57.6705	1.1840	-61912.9	1271.1	577.3308	1.1840	5.5295	1.2214	-7.9434	2.3831
	39	28	11	-63.2000	0.3000	-67849.2	322.0	582.0779	0.3000	4.0906	0.3002	-5.5295	1.2214
	38	29	9	-67.2906	0.0122	-72240.6	13.1	585.3860	0.0130	0.5715	0.0158	-4.0906	0.3002
	37	30	7	-67.8620	0.0101	-72854.1	10.8	585.1750	0.0110	-1.0001	0.0142	-0.5715	0.0158
	36	31	5	-66.8620	0.0100	-71780.5	10.7	583.3925	0.0109	-4.4001	0.1004	1.0001	0.0142
	35	32	3	-62.4619	0.0999	-67056.8	107.3	578.2100	0.1000	-6.5399	0.9891	4.4001	0.1004
	34	33	1	-55.9221	0.9840	-60035.8	1056.4	570.8877	0.9840	-9.9896	1.5236	6.5399	0.9891
	33	34	-1	-45.9325	1.1632	-49311.4	1248.7	560.1157	1.1632	-13.4392	1.3263	9.9896	1.5236
	32	35	-3	-32.4933	0.6374	-34883.6	684.2	545.8940	0.6374	-15.5791	1.1081	13.4392	1.3263
	31	36	-5	-16.9142	0.9065	-18158.5	973.2	529.5325	0.9065	-18.9791	1.5561	15.5791	1.1081
	30	37	-7	2.0648	1.2649	2216.7	1357.9	509.7710	1.2649	-20.5506	2.0593	18.9791	1.5561
	29	38	-9	22.6154	1.6251	24279.0	1744.6	488.4380	1.6251	-24.0697	2.7920	20.5506	2.0593
	28	39	-11	46.6850	2.2703	50119.3	2437.4	463.5859	2.2704	-25.5086	3.8865	24.0697	2.7920
	27	40	-13	72.1937	3.1544	77504.4	3386.4	437.2948	3.1544			25.5086	3.8865
68	53	15	38	208.0250	12.4684	223327.9	13385.6	329.0961	12.4684	37.6516	17.0178		
	52	16	36	170.3734	11.5821	182906.5	12434.1	365.9653	11.5821	30.0270	15.7653	-37.6516	17.0178
	51	17	34	140.3465	10.6958	150670.7	11482.6	395.2098	10.6958	32.8823	14.5129	-30.0270	15.7653
	50	18	32	107.4642	9.8095	115369.5	10531.1	427.3097	9.8095	25.2576	13.2608	-32.8823	14.5129
	49	19	30	82.2065	8.9232	88253.9	9579.6	451.7848	8.9232	28.1130	12.0089	-25.2576	13.2608
	48	20	28	54.0936	8.0368	58072.8	8628.0	479.1154	8.0368	20.4883	10.7574	-28.1130	12.0089
	47	21	26	33.6053	7.1505	36077.4	7676.5	498.8212	7.1505	23.3436	9.5063	-20.4883	10.7574
	46	22	24	10.2617	6.2642	11016.5	6725.0	521.3824	6.2642	15.7190	8.2560	-23.3436	9.5063
	45	23	22	-5.4573	5.3779	-5858.8	5773.5	536.3189	5.3779	18.5743	7.0068	-15.7190	8.2560
	44	24	20	-24.0316	4.4916	-25799.4	4822.0	554.1107	4.4916	10.9496	5.7595	-18.5743	7.0068
	43	25	18	-34.9813	3.6053	-37554.6	3870.5	564.2779	3.6053	13.8050	4.5156	-10.9496	5.7595
	42	26	16	-48.7862	2.7189	-52375.1	2919.0	577.3004	2.7189	6.1803	3.2789	-13.8050	4.5156
	41	27	14	-54.9665	1.8326	-59010.0	1967.4	582.6983	1.8326	9.0356	2.0625	-6.1803	3.2789
	40	28	12	-64.0022	0.9463	-68710.3	1015.9	590.9515	0.9463	1.4110	0.9482	-9.0356	2.0625
	39	29	10	-65.4131	0.0598	-70225.1	64.2	591.5800	0.0600	4.5805	0.0602	-1.4110	0.9482
	38	30	8	-69.9936	0.0066	-75142.5	7.1	595.3780	0.0080	-2.9196	0.0094	-4.5805	0.0602
	37	31	6	-67.0740	0.0066	-72008.2	7.1	591.6760	0.0080	-0.5030	0.8943	2.9196	0.0094

A	N	Z	N-Z	MASSEN-EXCESS (MEV)		MASSEN-EXCESS (MICRO-EINH.)		BINDUNGS-ENERGIE (MEV)		NEGATONEN-ZERFALL ENERGIE (MEV)		ELEKTRONEN-EINFANG ENERGIE (MEV)	
	36	32	4	-66.5710	0.8943	-71468.1	960.1	590.3905	0.8943	-8.1277	1.9926	0.5030	0.8943
	35	33	2	-58.4433	1.7806	-62742.5	1911.6	581.4804	1.7806	-5.2724	3.2067	8.1277	1.9926
	34	34	0	-53.1709	2.6669	-57082.3	2863.1	575.4255	2.6669	-14.9412	3.4221	5.2724	3.2067
	33	35	-2	-38.2298	2.1443	-41042.0	2302.1	559.7019	2.1444	-12.0858	2.6885	14.9412	3.4221
	32	36	-4	-26.1439	1.6218	-28067.2	1741.1	546.8337	1.6218	-19.7105	1.9591	12.0858	2.6885
	31	37	-6	-6.4335	1.0992	-6906.7	1180.0	526.3407	1.0992	-17.2940	1.8298	19.7105	1.9591
	30	38	-8	10.8605	1.4629	11659.4	1570.5	508.2643	1.4629	-24.7940	2.3810	17.2940	1.8298
	29	39	-10	35.6545	1.8786	38277.3	2016.8	482.6879	1.8786	-21.6245	3.3427	24.7940	2.3810
	28	40	-12	57.2790	2.7649	61492.6	2968.3	460.2810	2.7649			21.6245	3.3427
69	53	16	37	183.3928	12.4524	196883.7	13368.5	361.0173	12.4524	33.3594	16.9935		
	52	17	35	150.0334	11.5635	161070.3	12414.2	393.5943	11.5635	30.9944	15.7373	-33.3594	16.9935
	51	18	33	119.0390	10.6746	127795.9	11459.9	423.8062	10.6746	28.6294	14.4813	-30.9944	15.7373
	50	19	31	90.4096	9.7858	97060.4	10505.6	451.6532	9.7858	26.2644	13.2256	-28.6294	14.4813
	49	20	29	64.1452	8.8969	68863.9	9551.3	477.1352	8.8969	23.8995	11.9701	-26.2644	13.2256
	48	21	27	40.2457	8.0080	43206.3	8597.1	500.2522	8.0080	21.5345	10.7149	-23.8995	11.9701
	47	22	25	18.7113	7.1191	20087.7	7642.8	521.0042	7.1191	19.1695	9.4603	-21.5345	10.7149
	46	23	23	-0.4582	6.2302	-491.9	6688.5	539.3912	6.2302	16.8045	8.2064	-19.1695	9.4603
	45	24	21	-17.2627	5.3413	-18532.6	5734.2	555.4133	5.3413	14.4395	6.9537	-16.8045	8.2064
	44	25	19	-31.7023	4.4524	-34034.4	4780.0	569.0704	4.4524	12.0745	5.7029	-14.4395	6.9537
	43	26	17	-43.7768	3.5635	-46997.1	3825.7	580.3625	3.5635	9.7096	4.4556	-12.0745	5.7029
	42	27	15	-53.4864	2.6747	-57420.9	2871.4	589.2896	2.6747	7.3446	3.2160	-9.7096	4.4556
	41	28	13	-60.8309	1.7858	-65305.8	1917.1	595.8517	1.7858	4.9796	1.9983	-7.3446	3.2160
	40	29	11	-65.8105	0.8969	-70651.7	962.9	600.0488	0.8969	2.6146	0.8969	-4.9796	1.9983
	39	30	9	-68.4251	0.0066	-73458.7	7.0	601.8810	0.0080	0.9015	0.0076	-2.6146	0.8969
	38	31	7	-69.3266	0.0039	-74426.4	4.2	602.0000	0.0060	-2.2256	0.0066	-0.9015	0.0076
	37	32	5	-67.1010	0.0054	-72037.2	5.8	598.9920	0.0070	-3.8996	0.3000	2.2256	0.0066
	36	33	3	-63.2015	0.3000	-67850.8	322.0	594.3100	0.3000	-6.8453	1.2261	3.8996	0.3000
	35	34	1	-56.3562	1.1889	-60501.9	1276.3	586.6822	1.1889	-10.2234	1.8168	6.8453	1.2261
	34	35	-1	-46.1328	1.3737	-49526.5	1474.8	575.6764	1.3737	-13.6014	1.6178	10.2234	1.8168
	33	36	-3	-32.5314	0.8546	-34924.5	917.4	561.2926	0.8546	-16.5471	1.2639	13.6014	1.6178
	32	37	-5	-15.9843	0.9313	-17160.1	999.8	543.9630	0.9313	-18.2212	1.5991	16.5471	1.2639
	31	38	-7	2.2369	1.3000	2401.4	1395.6	524.9594	1.3000	-21.3481	2.1177	18.2212	1.5991
	30	39	-9	23.5850	1.6717	25320.0	1794.7	502.8288	1.6717	-23.0613	3.0580	21.3481	2.1177
	29	40	-11	46.6463	2.5606	50077.7	2749.0	478.9851	2.5606	-25.4263	4.2960	23.0613	3.0580
	28	41	-13	72.0726	3.4495	77374.4	3703.2	452.7763	3.4495			25.4263	4.2960
70	54	16	38	194.3619	12.4930	208659.6	13412.0	358.1198	12.4930	31.4174	17.0488		
	53	17	36	162.9445	11.6012	174931.1	12454.6	388.7547	11.6012	34.4687	15.7885	-31.4174	17.0488
	52	18	34	128.4758	10.7094	137926.8	11497.2	422.4409	10.7094	26.7200	14.5285	-34.4687	15.7885
	51	19	32	101.7558	9.8176	109241.2	10539.8	448.3785	9.8176	29.7713	13.2686	-26.7200	14.5285
	50	20	30	71.9845	8.9258	77279.9	9582.4	477.3673	8.9258	22.0226	12.0090	-29.7713	13.2686



A	N	Z	N-Z	MASSEN-EXCESS (MEV)	MASSEN-EXCESS (MICRO-EINH.)	BINDUNGS-ENERGIE (MEV)	NEGATONEN-ZERFALL ENERGIE (MEV)	ELEKTRONEN-EINFANG ENERGIE (MEV)					
49	21	28		49.9619	8.0340	53637.3	8625.0	498.6074	8.0340	25.0739	10.7498	-22.0226	12.0090
48	22	26		24.8881	7.1423	26718.9	7667.7	522.8988	7.1423	17.3252	9.4911	-25.0739	10.7498
47	23	24		7.5629	6.2505	8119.2	6710.3	539.4416	6.2505	20.3765	8.2331	-17.3252	9.4911
46	24	22		-12.8136	5.3587	-13756.2	5752.9	559.0356	5.3587	12.6278	6.9763	-20.3765	8.2331
45	25	20		-25.4414	4.4669	-27312.9	4795.5	570.8809	4.4669	15.6791	5.7214	-12.6278	6.9763
44	26	18		-41.1204	3.5751	-44145.4	3838.1	585.7775	3.5751	7.9304	4.4701	-15.6791	5.7214
43	27	16		-49.0508	2.6833	-52659.1	2880.7	592.9255	2.6833	10.9817	3.2265	-7.9304	4.4701
42	28	14		-60.0325	1.7916	-64448.6	1923.4	603.1247	1.7916	3.2330	2.0048	-10.9817	3.2265
41	29	12		-63.2654	0.8998	-67919.4	966.0	605.5752	0.8998	6.2843	0.8998	-3.2330	2.0048
40	30	10		-69.5497	0.0065	-74666.0	7.0	611.0770	0.0080	-0.6526	0.0092	-6.2843	0.8998
39	31	8		-68.8972	0.0065	-73965.4	7.0	609.6420	0.0080	1.6605	0.0076	0.6526	0.0092
38	32	6		-70.5576	0.0039	-75748.0	4.2	610.5200	0.0060	-6.2356	0.0309	-1.6605	0.0076
37	33	4		-64.3221	0.0307	-69053.8	32.9	603.5020	0.0310	-3.1106	0.9233	6.2356	0.0309
36	34	2		-61.2115	0.9228	-65714.4	990.7	599.6090	0.9228	-10.8593	2.0357	3.1106	0.9233
35	35	0		-50.3522	1.8146	-54056.3	1948.0	587.9673	1.8146	-9.8194	2.2316	10.8593	2.0357
34	36	-2		-40.5328	1.2990	-43514.5	1394.6	577.3654	1.2991	-17.5681	1.5170	9.8194	2.2316
33	37	-4		-22.9648	0.7835	-24654.1	841.2	559.0149	0.7835	-14.4431	1.3790	17.5681	1.5170
32	38	-6		-8.5217	1.1348	-9148.5	1218.3	543.7894	1.1348	-22.3391	1.8913	14.4431	1.3790
31	39	-8		13.8174	1.5131	14833.9	1624.4	520.6678	1.5131	-20.0261	2.4205	22.3391	1.8913
30	40	-10		33.8435	1.8893	36333.2	2028.3	499.8593	1.8894	-26.9629	3.3622	20.0261	2.4205
29	41	-12		60.8064	2.7811	65279.5	2985.7	472.1139	2.7811			26.9629	3.3622
71	55	16	39	209.3701	12.5803	224772.0	13505.8	351.1829	12.5803	34.9782	17.1700		
	54	17	37	174.3919	11.6853	187220.7	12544.9	385.3787	11.6853	32.6397	15.9052	-34.9782	17.1700
	53	18	35	141.7522	10.7903	152179.9	11584.0	417.2359	10.7903	30.3012	14.6406	-32.6397	15.9052
	52	19	33	111.4510	9.8953	119649.7	10623.2	446.7547	9.8953	27.9627	13.3761	-30.3012	14.6406
	51	20	31	83.4883	9.0002	89629.9	9662.3	473.9349	9.0002	25.6242	12.1119	-27.9627	13.3761
	50	21	29	57.8641	8.1052	62120.7	8701.4	498.7767	8.1052	23.2857	10.8481	-25.6242	12.1119
	49	22	27	34.5784	7.2102	37122.1	7740.6	521.2799	7.2102	20.9472	9.5848	-23.2857	10.8481
	48	23	25	13.6312	6.3152	14633.9	6779.7	541.4447	6.3152	18.6087	8.3222	-20.9472	9.5848
	47	24	23	-4.9775	5.4201	-5343.7	5818.9	559.2710	5.4201	16.2702	7.0608	-18.6087	8.3222
	46	25	21	-21.2477	4.5251	-22810.8	4858.0	574.7587	4.5251	13.9317	5.8012	-16.2702	7.0608
	45	26	19	-35.1794	3.6301	-37767.3	3897.1	587.9080	3.6301	11.5932	4.5451	-13.9317	5.8012
	44	27	17	-46.7726	2.7351	-50213.3	2936.3	598.7187	2.7351	9.2547	3.2964	-11.5932	4.5451
	43	28	15	-56.0273	1.8400	-60148.9	1975.4	607.1910	1.8400	6.9162	2.0685	-9.2547	3.2964
	42	29	13	-62.9436	0.9450	-67573.8	1014.5	613.3247	0.9450	4.5777	0.9463	-6.9162	2.0685
	41	30	11	-67.5213	0.0498	-72488.3	53.4	617.1200	0.0500	2.6135	0.0500	-4.5777	0.9463
	40	31	9	-70.1347	0.0052	-75294.0	5.6	618.9510	0.0070	-0.2356	0.0070	-2.6135	0.0500
	39	32	7	-69.8992	0.0047	-75041.1	5.0	617.9330	0.0066	-2.0066	0.0100	0.2356	0.0070
	38	33	5	-67.8926	0.0089	-72887.0	9.5	615.1440	0.0100	-4.4016	0.3001	2.0066	0.0100
	37	34	3	-63.4911	0.3000	-68161.6	322.0	609.9600	0.3000	-7.1148	1.2321	4.4016	0.3001

A	N	Z	N-Z	MASSEN-EXCESS (MEV)		MASSEN-EXCESS (MICRO-EINH.)		BINDUNGS-ENERGIE (MEV)		NEGATONEN-ZERFALL ENERGIE (MEV)		ELEKTRONEN-EINFANG ENERGIE (MEV)	
	36	35	1	-56.3763	1.1950	-60523.4	1282.9	602.0628	1.1950	-10.4547	1.8306	7.1148	1.2321
	35	36	-1	-45.9216	1.3867	-49299.7	1488.8	590.8256	1.3867	-13.7946	1.6398	10.4547	1.8306
	34	37	-3	-32.1270	0.8752	-34490.3	939.5	576.2485	0.8752	-16.5079	1.3054	13.7946	1.6398
	33	38	-5	-15.6191	0.9686	-16768.1	1039.9	558.9582	0.9686	-18.9029	1.6604	16.5079	1.3054
	32	39	-7	3.2838	1.3487	3525.3	1447.9	539.2729	1.3487	-20.6738	2.1955	18.9029	1.6604
	31	40	-9	23.9576	1.7325	25720.0	1859.9	517.8166	1.7325	-23.5229	2.7681	20.6738	2.1955
	30	41	-11	47.4805	2.1589	50973.3	2317.8	493.5113	2.1590	-25.4871	3.7400	23.5229	2.7681
	29	42	-13	72.9676	3.0540	78335.3	3278.6	467.2418	3.0540			25.4871	3.7400
72	55	17	38	188.5885	11.6925	202461.5	12552.6	379.2536	11.6925	36.2862	15.9129		
	54	18	36	152.3023	10.7938	163506.0	11587.8	414.7573	10.7938	28.3976	14.6431	-36.2862	15.9129
	53	19	34	123.9046	9.8952	133019.4	10623.1	442.3725	9.8952	31.6291	13.3736	-28.3976	14.6431
	52	20	32	92.2756	8.9966	99063.6	9658.4	473.2191	8.9966	23.7405	12.1043	-31.6291	13.3736
	51	21	30	68.5350	8.0979	73576.7	8693.6	496.1772	8.0979	26.9719	10.8354	-23.7405	12.1043
	50	22	28	41.5631	7.1993	44620.6	7728.9	522.3667	7.1993	19.0834	9.5670	-26.9719	10.8354
	49	23	26	22.4797	6.3006	24133.4	6764.1	540.6676	6.3006	22.3148	8.2994	-19.0834	9.5670
	48	24	24	0.1649	5.4020	177.1	5799.4	562.1999	5.4020	14.4262	7.0329	-22.3148	8.2994
	47	25	22	-14.2613	4.5034	-15310.4	4834.7	575.8437	4.5034	17.6577	5.7684	-14.4262	7.0329
	46	26	20	-31.9190	3.6047	-34267.0	3869.9	592.7190	3.6047	9.7691	4.5075	-17.6577	5.7684
	45	27	18	-41.6881	2.7061	-44754.8	2905.2	601.7056	2.7061	13.0005	3.2542	-9.7691	4.5075
	44	28	16	-54.6886	1.8075	-58711.7	1940.4	613.9237	1.8075	5.1120	2.0231	-13.0005	3.2542
	43	29	14	-59.8006	0.9088	-64199.7	975.7	618.2532	0.9088	8.3434	0.9089	-5.1120	2.0231
	42	30	12	-68.1440	0.0090	-73156.9	9.6	625.8142	0.0102	0.4393	0.0118	-8.3434	0.9089
	41	31	10	-68.5833	0.0076	-73628.4	8.2	625.4710	0.0090	3.9955	0.0085	-0.4393	0.0118
	40	32	8	-72.5787	0.0037	-77917.8	3.9	628.6840	0.0060	-4.3596	0.0116	-3.9955	0.0085
	39	33	6	-68.2192	0.0110	-73237.6	11.8	623.5420	0.0120	-0.9709	0.9107	4.3596	0.0116
	38	34	4	-67.2483	0.9106	-72195.3	977.6	621.7887	0.9106	-8.8594	2.0255	0.9709	0.9107
	37	35	2	-58.3889	1.8093	-62684.1	1942.4	612.1468	1.8093	-5.6280	3.2567	8.8594	2.0255
	36	36	0	-52.7609	2.7079	-56642.1	2907.1	605.7364	2.7079	-15.5110	3.4893	5.6280	3.2567
	35	37	-2	-37.2499	2.2006	-39990.1	2362.4	589.4429	2.2006	-12.2796	2.7766	15.5110	3.4893
	34	38	-4	-24.9703	1.6932	-26807.2	1817.8	576.3809	1.6932	-20.1681	2.0672	12.2796	2.7766
	33	39	-6	-4.8022	1.1859	-5155.4	1273.1	555.4303	1.1859	-16.7794	1.9685	20.1681	2.0672
	32	40	-8	11.9773	1.5712	12858.3	1686.8	537.8684	1.5712	-25.1344	2.5163	16.7794	1.9685
	31	41	-10	37.1117	1.9655	39841.7	2110.1	511.9515	1.9655	-21.5782	3.0697	25.1344	2.5163
	30	42	-12	58.6899	2.3580	63007.3	2531.4	489.5908	2.3580	-29.4824	4.0207	21.5782	3.0697
	29	43	-14	88.1724	3.2566	94658.5	3496.2	459.3260	3.2566			29.4824	4.0207
73	56	17	39	201.3924	12.6771	216207.3	13609.6	374.5211	12.6771	34.4752	17.3016		
	55	18	37	166.9172	11.7744	179196.0	12640.6	408.2139	11.7744	32.1508	16.0260	-34.4752	17.3016
	54	19	35	134.7663	10.8718	144680.1	11671.5	439.5823	10.8718	29.8265	14.7506	-32.1508	16.0260
	53	20	33	104.9399	9.9691	112659.5	10702.5	468.6263	9.9691	27.5021	13.4753	-29.8265	14.7506
	52	21	31	77.4378	9.0665	83134.3	9733.4	495.3459	9.0665	25.1777	12.2004	-27.5021	13.4753

A	N	Z	N-Z	MASSEN-EXCESS (MEV)		MASSEN-EXCESS (MICRO-EINH.)		BINDUNGS-ENERGIE (MEV)		NEGATONEN-ZERFALL ENERGIE (MEV)		ELEKTRONEN-EINFANG ENERGIE (MEV)	
	51	22	29	52.2601	8.1638	56104.4	8764.4	519.7412	8.1638	22.8534	10.9258	-25.1777	12.2004
	50	23	27	29.4067	7.2612	31569.9	7795.3	541.8121	7.2612	20.5290	9.6517	-22.8534	10.9258
	49	24	25	8.8777	6.3585	9530.8	6826.3	561.5586	6.3585	18.2046	8.3784	-20.5290	9.6517
	48	25	23	-9.3269	5.4559	-10013.0	5857.2	578.9808	5.4559	15.8802	7.1062	-18.2046	8.3784
	47	26	21	-25.2072	4.5532	-27061.5	4888.2	594.0786	4.5532	13.5559	5.8360	-15.8802	7.1062
	46	27	19	-38.7630	3.6506	-41614.5	3919.1	606.8520	3.6506	11.2315	4.5692	-13.5559	5.8360
	45	28	17	-49.9945	2.7479	-53672.2	2950.1	617.3010	2.7479	8.9071	3.3100	-11.2315	4.5692
	44	29	15	-58.9017	1.8453	-63234.6	1981.0	625.4257	1.8453	6.5828	2.0721	-8.9071	3.3100
	43	30	13	-65.4844	0.9426	-70301.6	1012.0	631.2261	0.9426	4.2584	0.9435	-6.5828	2.0721
	42	31	11	-69.7428	0.0397	-74873.3	42.6	634.7020	0.0400	1.5505	0.0399	-4.2584	0.9435
	41	32	9	-71.2933	0.0036	-76537.8	3.8	635.4700	0.0060	-0.3716	0.0308	-1.5505	0.0399
	40	33	7	-70.9217	0.0306	-76138.9	32.9	634.3160	0.0310	-2.7506	0.0440	0.3716	0.0308
	39	34	5	-68.1712	0.0316	-73186.0	34.0	630.7830	0.0320	-5.0391	0.9352	2.7506	0.0440
	38	35	3	-63.1321	0.9346	-67776.3	1003.4	624.9615	0.9346	-7.3635	2.0614	5.0391	0.9352
	37	36	1	-55.7686	1.8373	-59871.1	1972.4	616.8156	1.8373	-10.6837	2.7433	7.3635	2.0614
	36	37	-1	-45.0849	2.0372	-48401.5	2187.1	605.3494	2.0372	-14.0040	2.5505	10.6837	2.7433
	35	38	-3	-31.0809	1.5345	-33367.3	1647.4	590.5630	1.5345	-16.3283	1.8491	14.0040	2.5505
	34	39	-5	-14.7526	1.0317	-15837.8	1107.6	573.4522	1.0317	-18.6169	1.7638	16.3283	1.8491
	33	40	-7	3.8643	1.4306	4148.6	1535.9	554.0528	1.4306	-20.9959	2.3036	18.6169	1.7638
	32	41	-9	24.8602	1.8055	26689.0	1938.3	532.2745	1.8055	-22.9179	2.8766	20.9959	2.3036
	31	42	-11	47.7781	2.2394	51292.7	2404.1	508.5742	2.2394	-25.6258	3.8584	22.9179	2.8766
	30	43	-13	73.4039	3.1420	78803.7	3373.2	482.1659	3.1421			25.6258	3.8584
74	57	17	40	218.7639	12.7493	234856.7	13687.2	365.2210	12.7493	38.4447	17.4006		
	56	18	38	180.3192	11.8422	193583.9	12713.3	402.8833	11.8422	30.4363	16.1187	-38.4447	17.4006
	55	19	36	149.8828	10.9351	160908.6	11739.5	432.5372	10.9351	33.7880	14.8370	-30.4363	16.1187
	54	20	34	116.0949	10.0280	124635.1	10765.7	465.5427	10.0280	25.7796	13.5555	-33.7880	14.8370
	53	21	32	90.3153	9.1209	96959.2	9791.9	490.5398	9.1209	29.1312	12.2743	-25.7796	13.5555
	52	22	30	61.1841	8.2138	65685.0	8818.1	518.8885	8.2138	21.1228	10.9934	-29.1312	12.2743
	51	23	28	40.0613	7.3067	43008.4	7844.2	539.2289	7.3067	24.4744	9.7131	-21.1228	10.9934
	50	24	26	15.5869	6.3996	16733.5	6870.4	562.9209	6.3996	16.4660	8.4335	-24.4744	9.7131
	49	25	24	-0.8791	5.4925	-943.8	5896.6	578.6044	5.4926	19.8177	7.1550	-16.4660	8.4335
	48	26	22	-20.6968	4.5855	-22219.3	4922.8	597.6397	4.5855	11.8093	5.8785	-19.8177	7.1550
	47	27	20	-32.5061	3.6784	-34897.3	3949.0	608.6665	3.6784	15.1609	4.6055	-11.8093	5.8785
	46	28	18	-47.6670	2.7713	-51173.5	2975.1	623.0449	2.7713	7.1525	3.3399	-15.1609	4.6055
	45	29	16	-54.8195	1.8642	-58852.2	2001.3	629.4150	1.8642	10.5041	2.0955	-7.1525	3.3399
	44	30	14	-65.3236	0.9571	-70129.0	1027.5	639.1367	0.9571	2.4958	0.9584	-10.5041	2.0955
	43	31	12	-67.8194	0.0498	-72808.4	53.4	640.8500	0.0500	5.5995	0.0499	-2.4958	0.9584
	42	32	10	-73.4188	0.0034	-78819.7	3.7	645.6670	0.0060	-2.5636	0.0061	-5.5995	0.0499
	41	33	8	-70.8553	0.0050	-76067.6	5.4	642.3210	0.0070	1.3565	0.0071	2.5636	0.0061
	40	34	6	-72.2117	0.0051	-77523.8	5.4	642.8950	0.0070	-6.8178	0.9141	-1.3565	0.0071

A	N	Z	N-Z	MASSEN-EXCESS (MEV)		MASSEN-EXCESS (MICRO-EINH.)		BINDUNGS-ENERGIE (MEV)		NEGATONEN-ZERFALL ENERGIE (MEV)		ELEKTRONEN-EINFANG ENERGIE (MEV)	
39	35	4		-65.3940	0.9141	-70204.5	981.3	635.2948	0.9141	-3.4662	2.0377	6.8178	0.9141
38	36	2		-61.9278	1.8212	-66483.4	1955.1	631.0462	1.8212	-11.4745	3.2803	3.4662	2.0377
37	37	0		-50.4533	2.7283	-54164.7	2929.0	618.7892	2.7283	-10.1202	3.5240	11.4745	3.2803
36	38	-2		-40.3331	2.2305	-43300.1	2394.6	607.8865	2.2305	-18.1286	2.8244	10.1202	3.5240
35	39	-4		-22.2045	1.7327	-23837.9	1860.1	588.9755	1.7327	-14.7770	2.1277	18.1286	2.8244
34	40	-6		-7.4275	1.2349	-7973.9	1325.7	573.4161	1.2349	-22.9512	2.0563	14.7770	2.1277
33	41	-8		15.5237	1.6442	16665.7	1765.1	549.6824	1.6442	-19.0312	2.6298	22.9512	2.0563
32	42	-10		34.5549	2.0525	37096.9	2203.5	529.8688	2.0525	-27.1942	3.2391	19.0312	2.6298
31	43	-12		61.7491	2.5058	66291.5	2690.1	501.8921	2.5058	-24.0905	4.2340	27.1942	3.2391
30	44	-14		85.8396	3.4129	92154.2	3663.9	477.0191	3.4129			24.0905	4.2340
75	57	18	39	197.2731	12.0561	211785.1	12943.0	394.0008	12.0561	34.4560	16.4177		
	56	19	37	162.8171	11.1441	174794.3	11963.9	427.6744	11.1441	32.1211	15.1291	-34.4560	16.4177
	55	20	35	130.6960	10.2321	140310.3	10984.8	459.0130	10.2321	29.7862	13.8406	-32.1211	15.1291
	54	21	33	100.9098	9.3201	108333.0	10005.8	488.0167	9.3201	27.4512	12.5524	-29.7862	13.8406
	53	22	31	73.4586	8.4081	78862.4	9026.7	514.6855	8.4081	25.1163	11.2645	-27.4512	12.5524
	52	23	29	48.3424	7.4961	51898.5	8047.6	539.0193	7.4961	22.7813	9.9771	-25.1163	11.2645
	51	24	27	25.5610	6.5841	27441.3	7068.5	561.0182	6.5841	20.4464	8.6904	-22.7813	9.9771
	50	25	25	5.1146	5.6721	5490.9	6089.4	580.6821	5.6721	18.1115	7.4048	-20.4464	8.6904
	49	26	23	-12.9968	4.7601	-13952.9	5110.3	598.0111	4.7601	15.7765	6.1210	-18.1115	7.4048
	48	27	21	-28.7734	3.8481	-30890.0	4131.2	613.0052	3.8481	13.4416	4.8403	-15.7765	6.1210
	47	28	19	-42.2149	2.9361	-45320.4	3152.1	625.6643	2.9361	11.1066	3.5662	-13.4416	4.8403
	46	29	17	-53.3216	2.0241	-57244.1	2173.0	635.9885	2.0241	8.7717	2.3095	-11.1066	3.5662
	45	30	15	-62.0933	1.1121	-66661.0	1193.9	643.9778	1.1121	6.4368	1.1299	-8.7717	2.3095
	44	31	13	-68.5301	0.2000	-73571.3	214.8	649.6321	0.2001	3.3024	0.2010	-6.4368	1.1299
	43	32	11	-71.8324	0.0194	-77116.6	20.8	652.1520	0.0200	1.1985	0.0200	-3.3024	0.2010
	42	33	9	-73.0309	0.0049	-78403.2	5.3	652.5680	0.0070	-0.8645	0.0062	-1.1985	0.0200
	41	34	7	-72.1664	0.0038	-77475.2	4.0	650.9211	0.0062	-3.0074	0.0204	0.8645	0.0062
	40	35	5	-69.1591	0.0200	-74246.6	21.5	647.1313	0.0206	-5.2379	0.9328	3.0074	0.0204
	39	36	3	-63.9211	0.9326	-68623.3	1001.2	641.1109	0.9326	-7.5729	2.0669	5.2379	0.9328
	38	37	1	-56.3482	1.8446	-60493.4	1980.3	632.7556	1.8446	-10.9105	2.7610	7.5729	2.0669
	37	38	-1	-45.4377	2.0544	-48780.3	2205.5	621.0626	2.0544	-14.2481	2.5808	10.9105	2.7610
	36	39	-3	-31.1897	1.5620	-33484.1	1676.9	606.0321	1.5620	-16.5830	1.8931	14.2481	2.5808
	35	40	-5	-14.6066	1.0695	-15681.1	1148.2	588.6666	1.0696	-18.8136	1.8217	16.5830	1.8931
	34	41	-7	4.2070	1.4747	4516.5	1583.2	569.0706	1.4747	-20.9565	2.4013	18.8136	1.8217
	33	42	-9	25.1635	1.8951	27014.6	2034.5	547.3316	1.8951	-23.0194	3.0016	20.9565	2.4013
	32	43	-11	48.1829	2.3277	51727.4	2498.9	523.5298	2.3277	-25.1233	3.7400	23.0194	3.0016
	31	44	-13	73.3062	2.9274	78698.8	3142.7	497.6240	2.9274	-28.2577	4.8281	25.1233	3.7400
	30	45	-15	101.5639	3.8394	109035.2	4121.8	468.5838	3.8394			28.2577	4.8281
76	58	18	40	212.6793	12.8499	228324.5	13795.2	386.6661	12.8499	32.7791	17.5358		
	57	19	38	179.9002	11.9325	193134.1	12810.3	418.6627	11.9325	36.1578	16.2393	-32.7791	17.5358

A	N	Z	N-Z	MASSEN-EXCESS (MEV)		MASSEN-EXCESS (MICRO-EINH.)		BINDUNGS-ENERGIE (MEV)		NEGATONEN-ZERFALL ENERGIE (MEV)		ELEKTRONEN-EINFANG ENERGIE (MEV)	
	56	20	36	143.7424	11.0151	154316.4	11825.4	454.0381	11.0151	28.0965	14.9430	-36.1578	16.2393
	55	21	34	115.6459	10.0976	124153.1	10840.5	481.3521	10.0976	31.4752	13.6469	-28.0965	14.9430
	54	22	32	84.1707	9.1802	90362.5	9855.5	512.0448	9.1802	23.4139	12.3511	-31.4752	13.6469
	53	23	30	60.7568	8.2628	65226.3	8870.6	534.6763	8.2628	26.7926	11.0557	-23.4139	12.3511
	52	24	28	33.9643	7.3454	36462.8	7885.7	560.6864	7.3454	18.7312	9.7608	-26.7926	11.0557
	51	25	26	15.2330	6.4280	16353.6	6900.8	578.6352	6.4280	22.1099	8.4667	-18.7312	9.7608
	50	26	24	-6.8769	5.5105	-7382.8	5915.9	599.9626	5.5105	14.0486	7.1737	-22.1099	8.4667
	49	27	22	-20.9255	4.5931	-22464.9	4931.0	613.2288	4.5931	17.4273	5.8828	-14.0486	7.1737
	48	28	20	-38.3528	3.6757	-41174.2	3946.1	629.8737	3.6757	9.3660	4.5955	-17.4273	5.8828
	47	29	18	-47.7188	2.7583	-51229.2	2961.2	638.4572	2.7583	12.7447	3.3161	-9.3660	4.5955
	46	30	16	-60.4635	1.8408	-64911.4	1976.3	650.4195	1.8408	4.6834	2.0595	-12.7447	3.3161
	45	31	14	-65.1469	0.9234	-69939.3	991.3	654.3204	0.9234	8.0621	0.9234	-4.6834	2.0595
	44	32	12	-73.2090	0.0032	-78594.4	3.4	661.6000	0.0060	-0.9236	0.0124	-8.0621	0.9234
	43	33	10	-72.2854	0.0120	-77602.9	12.9	659.8940	0.0130	2.9715	0.0141	0.9236	0.0124
	42	34	8	-75.2569	0.0075	-80793.0	8.0	662.0830	0.0090	-4.6306	0.0603	-2.9715	0.0141
	41	35	6	-70.6263	0.0598	-75821.8	64.2	656.6700	0.0600	-1.3032	0.9792	4.6306	0.0603
	40	36	4	-69.3231	0.9774	-74422.7	1049.3	654.5844	0.9774	-9.3645	2.1321	1.3032	0.9792
	39	37	2	-59.9586	1.8948	-64369.3	2034.2	644.4374	1.8948	-5.9858	3.3911	9.3645	2.1321
	38	38	0	-53.9728	2.8123	-57943.2	3019.1	637.6691	2.8123	-16.0603	3.6493	5.9858	3.3911
	37	39	-2	-37.9125	2.3257	-40701.5	2496.8	620.8264	2.3257	-12.6816	2.9650	16.0603	3.6493
	36	40	-4	-25.2309	1.8391	-27087.0	1974.4	607.3624	1.8391	-20.7429	2.2829	12.6816	2.9650
	35	41	-6	-4.4880	1.3525	-4818.2	1452.0	585.8370	1.3525	-17.4155	2.1978	20.7429	2.2829
	34	42	-8	12.9275	1.7324	13878.5	1859.8	567.6390	1.7324	-25.0175	2.7745	17.4155	2.1978
	33	43	-10	37.9451	2.1672	40736.4	2326.6	541.8390	2.1672	-21.1225	3.3779	25.0175	2.7745
	32	44	-12	59.0676	2.5910	63412.8	2781.6	519.9340	2.5910	-30.1082	4.3615	21.1225	3.3779
	31	45	-14	89.1758	3.5085	95735.8	3766.6	489.0434	3.5085			30.1082	4.3615
77	59	18	41	232.8019	12.9775	249927.4	13932.1	374.6149	12.9775	37.0384	17.7120		
	58	19	39	195.7635	12.0541	210164.4	12940.8	410.8709	12.0541	34.6805	16.4071	-37.0384	17.7120
	57	20	37	161.0830	11.1307	172932.6	11949.5	444.7689	11.1307	32.3226	15.1024	-34.6805	16.4071
	56	21	35	128.7603	10.2073	138232.3	10958.2	476.3091	10.2073	29.9647	13.7978	-32.3226	15.1024
	55	22	33	98.7956	9.2839	106063.2	9966.9	505.4914	9.2839	27.6068	12.4936	-29.9647	13.7978
	54	23	31	71.1887	8.3605	76425.6	8975.5	532.3158	8.3605	25.2489	11.1897	-27.6068	12.4936
	53	24	29	45.9398	7.4371	49319.3	7984.2	556.7823	7.4371	22.8911	9.8863	-25.2489	11.1897
	52	25	27	23.0488	6.5137	24744.3	6992.9	578.8909	6.5137	20.5332	8.5837	-22.8911	9.8863
	51	26	25	2.5156	5.5903	2700.7	6001.6	598.6416	5.5903	18.1753	7.2823	-20.5332	8.5837
	50	27	23	-15.6597	4.6670	-16811.6	5010.3	616.0344	4.6670	15.8174	5.9829	-18.1753	7.2823
	49	28	21	-31.4770	3.7436	-33792.6	4018.9	631.0693	3.7436	13.4595	4.6870	-15.8174	5.9829
	48	29	19	-44.9365	2.8202	-48242.1	3027.6	643.7463	2.8202	11.1016	3.3987	-13.4595	4.6870
	47	30	17	-56.0381	1.8968	-60160.4	2036.3	654.0654	1.8968	8.7437	2.1320	-11.1016	3.3987
	46	31	15	-64.7817	0.9734	-69547.3	1045.0	662.0267	0.9734	6.3858	0.9746	-8.7437	2.1320

A	N	Z	N-Z	MASSEN-EXCESS (MEV)		MASSEN-EXCESS (MICRO-EINH.)		BINDUNGS-ENERGIE (MEV)		NEGATONEN-ZERFALL. ENERGIE (MEV)		ELEKTRONEN-EINFANG ENERGIE (MEV)	
	45	32	13	-71.1675	0.0497	-76402.8	53.4	667.6300	0.0500	2.7495	0.0509	-6.3858	0.9746
	44	33	11	-73.9170	0.0108	-79354.5	11.6	669.5970	0.0120	0.6835	0.0125	-2.7495	0.0509
	43	34	9	-74.6004	0.0062	-80088.2	6.6	669.4980	0.0080	-1.3646	0.0088	-0.6835	0.0125
	42	35	7	-73.2359	0.0062	-78623.3	6.7	667.3510	0.0080	-2.8886	0.0801	1.3646	0.0088
	41	36	5	-70.3473	0.0798	-75522.3	85.7	663.6800	0.0800	-5.4037	1.0066	2.8886	0.0801
	40	37	3	-64.9436	1.0034	-69721.0	1077.2	657.4938	1.0034	-7.7616	2.1724	5.4037	1.0066
	39	38	1	-57.1820	1.9268	-61388.5	2068.5	648.9498	1.9268	-11.1351	2.8858	7.7616	2.1724
	38	39	-1	-46.0469	2.1484	-49434.2	2306.4	637.0322	2.1484	-14.5086	2.7199	11.1351	2.8858
	37	40	-3	-31.5384	1.6681	-33858.4	1790.8	621.7412	1.6681	-16.8665	2.0479	14.5086	2.7199
	36	41	-5	-14.6719	1.1879	-15751.2	1275.3	604.0923	1.1879	-19.3816	1.9600	16.8665	2.0479
	35	42	-7	4.7097	1.5591	5056.2	1673.7	583.9283	1.5591	-20.9056	2.5376	19.3816	1.9600
	34	43	-9	25.6153	2.0022	27499.6	2149.5	562.2402	2.0022	-22.9536	3.1636	20.9056	2.5376
	33	44	-11	48.5689	2.4494	52141.8	2629.6	538.5042	2.4494	-25.0196	3.8194	22.9536	3.1636
	32	45	-13	73.5885	2.9305	79001.9	3146.1	512.7021	2.9305	-28.6559	4.8416	25.0196	3.8194
	31	46	-15	102.2445	3.8539	109765.8	4137.4	483.2637	3.8539			28.6559	4.8416
78	59	19	40	213.4155	12.2896	229114.9	13193.6	401.2903	12.2896	38.7378	16.7354		
	58	20	38	174.6778	11.3596	187527.5	12195.2	439.2456	11.3596	30.7314	15.4213	-38.7378	16.7354
	57	21	36	143.9464	10.4296	154535.4	11196.9	469.1945	10.4296	34.0051	14.1075	-30.7314	15.4213
	56	22	34	109.9413	9.4997	118028.9	10198.5	502.4171	9.4997	25.9987	12.7939	-34.0051	14.1075
	55	23	32	83.9426	8.5697	90117.6	9200.1	527.6334	8.5697	29.2724	11.4807	-25.9987	12.7939
	54	24	30	54.6702	7.6398	58691.9	8201.8	556.1233	7.6398	21.2660	10.1680	-29.2724	11.4807
	53	25	28	33.4042	6.7098	35861.5	7203.4	576.6068	6.7098	24.5397	8.8560	-21.2660	10.1680
	52	26	26	8.8646	5.7798	9516.7	6205.0	600.3640	5.7799	16.5333	7.5451	-24.5397	8.8560
	51	27	24	-7.6687	4.8499	-8232.9	5206.7	616.1149	4.8499	19.8070	6.2360	-16.5333	7.5451
	50	28	22	-27.4757	3.9199	-29496.9	4208.3	635.1394	3.9199	11.8006	4.9301	-19.8070	6.2360
	49	29	20	-39.2763	2.9900	-42165.5	3209.9	646.1576	2.9900	15.0743	3.6309	-11.8006	4.9301
	48	30	18	-54.3505	2.0600	-58348.7	2211.6	660.4494	2.0600	7.0679	2.3496	-15.0743	3.6309
	47	31	16	-61.4184	1.1300	-65936.5	1213.2	666.7348	1.1301	10.3416	1.1476	-7.0679	2.3496
	46	32	14	-71.7600	0.2000	-77038.8	214.7	676.2939	0.2001	0.9886	0.2828	-10.3416	1.1476
	45	33	12	-72.7485	0.1999	-78100.1	214.6	676.5000	0.2000	4.2715	0.2000	-0.9886	0.2828
	44	34	10	-77.0200	0.0047	-82685.8	5.1	679.9890	0.0070	-3.5726	0.0077	-4.2715	0.2000
	43	35	8	-73.4474	0.0061	-78850.4	6.6	675.6340	0.0080	0.6955	0.0087	3.5726	0.0077
	42	36	6	-74.1429	0.0062	-79597.0	6.6	675.5470	0.0080	-7.1302	0.9380	-0.6955	0.0087
	41	37	4	-67.0127	0.9379	-71942.3	1006.9	667.6343	0.9380	-3.8566	2.0902	7.1302	0.9380
	40	38	2	-63.1561	1.8679	-67802.0	2005.3	662.9953	1.8679	-11.8629	3.3641	3.8566	2.0902
	39	39	0	-51.2932	2.7979	-55066.5	3003.7	650.3500	2.7979	-10.6303	3.6375	11.8629	3.3641
	38	40	-2	-40.6629	2.3246	-43654.2	2495.6	638.9372	2.3246	-18.6366	2.9716	10.6303	3.6375
	37	41	-4	-22.0263	1.8512	-23646.6	1987.4	619.5182	1.8512	-15.3630	2.3077	18.6366	2.9716
	36	42	-6	-6.6633	1.3779	-7153.5	1479.3	603.3727	1.3779	-23.1886	2.2944	15.3630	2.3077
	35	43	-8	16.5253	1.8346	17741.0	1969.5	579.4016	1.8346	-18.9206	2.9344	23.1886	2.2944

A	N	Z	N-Z	MASSEN-EXCESS (MEV)		MASSEN-EXCESS (MICRO-EINH.)		BINDUNGS-ENERGIE (MEV)		NEGATONEN-ZERFALL ENERGIE(MEV)		ELEKTRONEN-EINFANG ENERGIE(MEV)	
	34	44	-10	35.4460	2.2902	38053.5	2458.7	559.6986	2.2902	-26.7646	3.7266	18.9206	2.9344
	33	45	-12	62.2106	2.9398	66787.0	3156.1	532.1515	2.9398	-23.4817	4.4921	26.7646	3.7266
	32	46	-14	85.6923	3.3966	91996.1	3646.4	507.8873	3.3966	-32.8347	5.5005	23.4817	4.4921
	31	47	-16	118.5271	4.3265	127246.2	4644.8	474.2701	4.3265			32.8347	5.5005
79	60	19	41	229.4641	13.1805	246344.1	14150.1	393.3131	13.1805	37.0555	17.9895		
	59	20	39	192.4086	12.2433	206562.7	13143.9	429.5862	12.2433	34.6860	16.6651	-37.0555	17.9895
	58	21	37	157.7226	11.3061	169325.1	12137.8	463.4897	11.3061	32.3165	15.3409	-34.6860	16.6651
	57	22	35	125.4061	10.3689	134631.3	11131.7	495.0238	10.3690	29.9470	14.0169	-32.3165	15.3409
	56	23	33	95.4592	9.4318	102481.4	10125.6	524.1883	9.4318	27.5774	12.6932	-29.9470	14.0169
	55	24	31	67.8817	8.4946	72875.3	9119.5	550.9833	8.4946	25.2079	11.3698	-27.5774	12.6932
	54	25	29	42.6738	7.5574	45813.0	8113.4	575.4087	7.5574	22.8384	10.0470	-25.2079	11.3698
	53	26	27	19.8354	6.6202	21294.5	7107.2	597.4647	6.6202	20.4689	8.7250	-22.8384	10.0470
	52	27	25	-0.6335	5.6831	-680.1	6101.1	617.1511	5.6831	18.0994	7.4041	-20.4689	8.7250
	51	28	23	-18.7329	4.7459	-20110.9	5095.0	634.4681	4.7459	15.7299	6.0852	-18.0994	7.4041
	50	29	21	-34.4628	3.8087	-36997.9	4088.9	649.4155	3.8087	13.3604	4.7699	-15.7299	6.0852
	49	30	19	-47.8231	2.8715	-51341.1	3082.8	661.9934	2.8715	10.9908	3.4623	-13.3604	4.7699
	48	31	17	-58.8140	1.9343	-63140.5	2076.6	672.2018	1.9344	8.6213	2.1762	-10.9908	3.4623
	47	32	15	-67.4353	0.9972	-72396.0	1070.5	680.0406	0.9972	6.2518	0.9990	-8.6213	2.1762
	46	33	13	-73.6871	0.0598	-79107.7	64.2	685.5100	0.0600	2.2335	0.0601	-6.2518	0.9990
	45	34	11	-75.9205	0.0060	-81505.5	6.5	686.9610	0.0080	0.1545	0.0076	-2.2335	0.0601
	44	35	9	-76.0750	0.0047	-81671.3	5.0	686.3330	0.0070	-1.6206	0.0077	-0.1545	0.0076
	43	36	7	-74.4544	0.0061	-79931.5	6.5	683.9300	0.0080	-3.2263	0.9452	1.6206	0.0077
	42	37	5	-71.2282	0.9452	-76467.9	1014.7	679.9213	0.9452	-5.5958	2.1063	3.2263	0.9452
	41	38	3	-65.6324	1.8823	-70460.5	2020.8	673.5430	1.8824	-7.9653	3.3901	5.5958	2.1063
	40	39	1	-57.6671	2.8195	-61909.2	3026.9	664.7953	2.8195	-11.3576	4.1574	7.9653	3.3901
	39	40	-1	-46.3095	3.0552	-49716.1	3280.0	652.6552	3.0552	-14.7499	4.0049	11.3576	4.1574
	38	41	-3	-31.5596	2.5894	-33881.2	2779.9	637.1229	2.5894	-17.1194	3.3489	14.7499	4.0049
	37	42	-5	-14.4402	2.1236	-15502.4	2279.9	619.2210	2.1237	-19.4889	2.6941	17.1194	3.3489
	36	43	-7	5.0487	1.6579	5420.1	1779.8	598.9497	1.6579	-21.0946	2.6978	19.4889	2.6941
	35	44	-9	26.1434	2.1282	28066.6	2284.8	577.0726	2.1283	-22.8696	3.3605	21.0946	2.6978
	34	45	-11	49.0130	2.6006	52618.5	2791.9	553.4205	2.6006	-24.9487	4.0648	22.8696	3.3605
	33	46	-13	73.9617	3.1240	79402.5	3353.8	527.6894	3.1240	-28.9670	5.1238	24.9487	4.0648
	32	47	-15	102.9287	4.0612	110500.4	4360.0	497.9399	4.0612			28.9670	5.1238
80	61	19	42	247.0688	13.4315	265243.8	14419.5	383.7799	13.4315	40.9950	18.3389		
	60	20	40	206.0738	12.4864	221233.1	13404.9	423.9924	12.4864	33.0224	17.0032	-40.9950	18.3389
	59	21	38	173.0514	11.5413	185781.5	12390.3	456.2324	11.5413	36.2498	15.6678	-33.0224	17.0032
	58	22	36	136.8015	10.5962	146865.0	11375.6	491.6998	10.5962	28.2772	14.3325	-36.2498	15.6678
	57	23	34	108.5243	9.6511	116507.6	10361.0	519.1946	9.6511	31.5047	12.9976	-28.2772	14.3325
	56	24	32	77.0197	8.7059	82685.4	9346.4	549.9168	8.7060	23.5321	11.6629	-31.5047	12.9976
	55	25	30	53.4876	7.7608	57422.3	8331.8	572.6664	7.7608	26.7595	10.3288	-23.5321	11.6629

A	N	Z	N-Z	MASSEN-EXCESS (MEV)	MASSEN-EXCESS (MICRO-EINH.)	BINDUNGS-ENERGIE (MEV)	NEGATONEN-ZERFALL ENERGIE (MEV)	ELEKTRONEN-EINFANG ENERGIE (MEV)					
54	26	28		26.7281	6.8157	28694.3	7317.1	598.6434	6.8157	18.7869	8.9955	-26.7595	10.3288
53	27	26		7.9412	5.8706	8525.4	6302.5	616.6478	5.8706	22.0143	7.6632	-18.7869	8.9955
52	28	24		-14.0731	4.9255	-15108.3	5287.9	637.8797	4.9255	14.0417	6.3328	-22.0143	7.6632
51	29	22		-28.1148	3.9804	-30182.9	4273.2	651.1389	3.9804	17.2691	5.0057	-14.0417	6.3328
50	30	20		-45.3839	3.0353	-48722.4	3258.6	667.6256	3.0353	9.2965	3.6854	-17.2691	5.0057
49	31	18		-54.6804	2.0902	-58702.8	2244.0	676.1396	2.0902	12.5239	2.3833	-9.2965	3.6854
48	32	16		-67.2043	1.1451	-72148.0	1229.3	687.8811	1.1451	4.5513	1.1624	-12.5239	2.3833
47	33	14		-71.7557	0.1999	-77034.2	214.6	691.6500	0.2000	5.9975	0.2000	-4.5513	1.1624
46	34	12		-77.7531	0.0045	-83472.8	4.9	696.8650	0.0070	-1.8706	0.0064	-5.9975	0.2000
45	35	10		-75.8826	0.0046	-81464.7	4.9	694.2120	0.0070	2.0075	0.0076	1.8706	0.0064
44	36	8		-77.8900	0.0060	-83619.8	6.5	695.4370	0.0080	-5.0546	0.6000	-2.0075	0.0076
43	37	6		-72.8355	0.6000	-78193.4	644.1	689.6000	0.6000	-1.7116	1.6575	5.0546	0.6000
42	38	4		-71.1238	1.5451	-76355.9	1658.8	687.1059	1.5451	-9.6842	2.9306	1.7116	1.6575
41	39	2		-61.4396	2.4902	-65959.3	2673.4	676.6393	2.4902	-6.4568	4.2429	9.6842	2.9306
40	40	0		-54.9828	3.4353	-59027.5	3688.0	669.4000	3.4353	-16.4794	4.5462	6.4568	4.2429
39	41	-2		-38.5034	2.9777	-41335.8	3196.8	652.1382	2.9777	-13.2520	3.9010	16.4794	4.5462
38	42	-4		-25.2514	2.5202	-27109.0	2705.5	638.1037	2.5202	-21.2246	3.2566	13.2520	3.9010
37	43	-6		-4.0269	2.0626	-4323.1	2214.3	616.0967	2.0626	-17.8817	2.8440	21.2246	3.2566
36	44	-8		13.8548	1.9581	14874.0	2102.1	597.4326	1.9581	-24.9436	3.1322	17.8817	2.8440
35	45	-10		38.7984	2.4446	41652.5	2624.5	571.7065	2.4446	-21.0656	3.8176	24.9436	3.1322
34	46	-12		59.8641	2.9322	64267.8	3147.9	549.8585	2.9322	-28.9337	4.6529	21.0656	3.8176
33	47	-14		88.7977	3.6127	95329.9	3878.4	520.1424	3.6127	-27.4875	5.8159	28.9337	4.6529
32	48	-16		116.2852	4.5578	124839.5	4893.1	491.8724	4.5578			27.4875	5.8159